



# Home Helpers

Grade Level: 6-8

Subject Areas: science, math

Duration:  
Preparation - 10-40 minutes depending on the “nest builder” style chosen and the availability of materials.  
Activity, Part 1 - 20-50 minutes depending on the “nest builder” style chosen.

Activity Part 2 - 3 weeks to several months.

Setting:  
Classroom and Outdoors

Group Size:  
1-30 students

Materials:  
see specific “Background” section for exact materials needed.

Skills Used:  
constructing, observation, data collection, analysis.

Vocabulary:  
habitat, reproduction, brood, clutch, predator

Project BEAK Links:  
• [Birding Basics](#)

## OBJECTIVES

- Students will begin to understand the preferences birds have for specific nesting materials.
- Students will count and identify birds and graph their results.
- Students will gain an appreciation for birds and their basic needs.

## Nebraska State Science Standards

- 5.2.1, 8.2.1, 8.4.3, 8.4.4, 8.4.5

## Nebraska State Math Standards

- 5.4.1, 6.4.1, 7.4.1, 7.4.2

## BACKGROUND

As the weather begins to warm in the spring, many animals, including birds, prepare for the breeding season.

For some bird species, like warblers and Least Terns, the breeding season begins with a journey from their southern wintering grounds. Often time, the male birds migrate first and, upon reaching their breeding grounds, begin establishing their nesting territory.

Many times, the female birds return to the breeding grounds a week or two after the males. Upon arriving at the breeding grounds, females are often courted by males.

Courting can include intricate dances, like the Sandhills Cranes, or signing, like the Red-winged Blackbird, or even nest building, like the Marsh Wren.

Once a mating pair is established, a formal nesting site is created. For some species, both the male and female birds help build the nest. In other species, only the female is responsible for nest building. And, if a few species, the male alone is responsible for building the nest.

Once the nest is complete, eggs are soon to

follow. The number of eggs laid (the clutch) is dependent on the species of birds – clutch size can range from one egg to more than a dozen. The clutch size also depends on the health of the bird, environmental conditions, and the age of the bird.

To encourage birds to build nests in your area, try providing them with nesting materials. The following list is just a few examples of the materials you can offer birds for nesting materials.

Possible Nest Building Materials include:

- fur from a pet, horsehair, or human hair from your brush (do not use pet hair from a pet which has received flea or tick treatments);
- Dried Grass (preferably long grasses);
- Peat moss or Spanish moss (from a craft store);
- Yarn, string, or thread (strands ranging in length from 4-6 inches);
- Long strips of soft cloth;
- Un-raveled Burlap or rope;
- Plant fluff or down such as Milkweed seeds, cattail fluff, and cottonwood seeds;
- cotton or sheep’s wool;
- jute, hemp, or other string-type fibers;
- a shallow pan of mud (keep moist daily);
- small twigs
- bark strips
- pine needles

**Nesting materials and “Nest Builders” should be placed in your area starting in late February or early March and continue through early June.**

Other birds, such as woodpeckers and bluebirds, build their nests in cavities. In addition to providing nest building materials, you may want to provide nesting boxes for cavity nesting birds.

### ACTIVITY, PART 1

Provide students with materials and instructions to create the “nest builder” of their choice. Additionally, you can provide students with the opportunity to create their own, unique “nest builder”.

Have students fill their “nest builder” with nesting materials and choose a place to hang their “nest builder” outside the school. You may want students to choose a central location where all “nest builders” are located, or you may wish to allow students to hang their “nest builder” separate from other students.

### ACTIVITY, PART 2

Once the “nest builders” have been in place and filled consistently for a week, explain to students that they are going to conduct an experiment to determine which species and how many are visiting the “nest builders”. You can organize the investigation in many ways:

- Which birds prefer each type of “nest builder”;
- A simple investigation of how many birds come to all the “nest builders” collectively;
- An investigation of what bird species come to the “nest builder” at different times of the day (i.e. morning visitors vs. afternoon visitors).

Once data has been collected, have students graph the results using a graphing software program such as Excel.

### EXTENSIONS

- Construct bird houses with students to attract cavity nesting birds such as bluebirds.
- Once a nest is built on your school grounds, keep track of the nest. Better yet, join Neighborhood Nest Watch to record your data. For more information, visit [nationalzoo.si.edu/conservationandscience/migratorybirds/Education](http://nationalzoo.si.edu/conservationandscience/migratorybirds/Education).

### ASSESSMENT

- Have a class discussion about the different types of nest that are built. Why do birds build each kind of nest. What advantages and disadvantages do each nest style have.

### ADDITIONAL RESOURCES: WEBSITES

- Smithsonian National Zoological Park: Migratory Bird Website  
[nationalzoo.si.edu/conservationandscience/migratorybirds/education](http://nationalzoo.si.edu/conservationandscience/migratorybirds/education)
- National Audubon Society: Bird and Wildlife Information  
[www.audubon.org/educate/expert](http://www.audubon.org/educate/expert)
- Natural History Museum of Los Angeles County: The Bird Site (click on “Nest Building” on the left sidebar).  
[www.nhm.org/birds](http://www.nhm.org/birds)
- Audubon at Home  
[audubonathome.org/birdstohelp/](http://audubonathome.org/birdstohelp/)
- Birding Around Your Yard and Around the World  
[www.wildbirds.com](http://www.wildbirds.com)
- Cornell Lab of Ornithology: All About Birds - Attracting Birds  
[www.allaboutbirds.org/netcommunity/attractingbirds-other](http://www.allaboutbirds.org/netcommunity/attractingbirds-other)

### ADDITIONAL RESOURCES: BOOKS

- National Wildlife Federation: Attracting Birds, Butterflies, and Other Backyard Wildlife by David Mizejewski  
Publisher: Creative Homeowner  
ISBN: 1-58011-150-5
- Attracting Birds to Your Backyard: 536 Ways to Create a Haven for Your Favorite Birds by Sally Roth  
Publisher: Rodale Books (2003)  
ISBN-10: 0875968929  
ISBN-13: 978-0875968926

### PERMISSIONS & CREDITS

- Project BEAK, its content, Teacher Resources and Activities are produced by the Nebraska Partnership for All-Bird Conservation; ©2009.



## Nest Builder Design: Mesh Bag

Materials: mesh bag, one or more nesting materials (see list in the “Background” section).

Instructions:

1. Using a small mesh bag, place one or more nesting materials in the bag.
2. Use a strong thread to tie the bag closed.
3. Hang from a branch. Enjoy.



## Nest Builder Design: Suet Feeder

Materials: suet feeder, one or more nesting materials (see list in the “Background” section).

Instructions:

1. Clean the suet feeder if it is not new.
2. Fill the suet feeder with one or more nesting materials.
4. Hang from a branch. Enjoy!



## Nest Builder Design: Hanging Ball

Materials: heavy twine, one or more nesting materials (see list in the “Background” section).

Instructions:

1. Begin with one or more nesting materials. Using your hands, clump the materials together tightly in a ball.
2. Still holding the material in one hand, begin wrapping the twine around the material until the material is held in place by the twine. Tie the twine in a knot.
3. Using a second piece of twine, hang the ball from a branch. Enjoy!

