

WILD at Schools: Build the Best Nest

Wildlife and Heritage Service

This free, 60 minute program is for grades 1-5 and is designed for a classroom or outdoor space.

Learning Objectives

As a result of this program, students will be able to:

- Explain why birds build nests and describe some of their different locations and types.
- Determine factors that birds must take into consideration when building a nest
- Understand that birds migrate to Maryland to reproduce and are protected by law.

Concepts to be covered

1st grade focus (NGSS): How birds care for their young by building nests and feeding them.

2nd grade focus (NGSS): Diversity of birds and different approaches to nest construction.

3rd grade focus (NGSS): Bird life cycles and how birds attract mates.

4th grade focus (NGSS): Adaption of birds results in different nest styles.

Curriculum Standards and Science & Engineering Practices Addressed

Grade	Standard	Detail	Program Feature
1 st -2 nd	K-2-ETS1-2	Develop a simple physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	Students design and build a bird nest that will safely hold eggs and an incubating bird.
1 st	1-LS1.A: 1-LS3.B:	Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek food Individuals of the same kind of animal are recognizable as similar but can also vary in many ways.	Students learn how birds use different body parts to construct their nest. Students recognize that male and female birds look different.
2 nd	2-LS4.1	Make observations of animals to compare the diversity of life in different habitats.	Students learn about the diversity of bird life in Maryland.
3 rd -5 th	3-5-ETS1-1 3-5-ETS1-2	Define a simple design problem that can be solved through the development of an object and includes several criteria for success and constraints on materials and time. Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design problem.	Students design and build a bird nest that will safely hold test 'eggs', within a limited time period and using only natural materials. Students each generate a solution and build one. Nests are tested and students suggest modifications.
3 rd	3-LS1-1	Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	Students explore the lifecycle of birds and their unique solutions to nest building.
4 th	4-LS1-1	Construct an argument with evidence that plants and animals have internal and external structures that function to support survival and reproduction.	Students learn about the external structures of birds that help them build nests and reproduce.

Program Summary

1. Introduction to why and when birds build nests, including the many migratory birds that visit Maryland.
2. Students work in teams to match nests to the bird that built them.
3. Student teams test different materials to decide the best ones to use for nest construction.
4. Teams construct and then test nests to see if they meet the defined criteria. Grade 5 students test their nests with the weight of parents and fledglings and calculate total weight.
5. Students consider the other factors that determine where birds build their nests such as access to food and protection from predators.

Key Program Vocabulary

Brood: all the chicks in a single nest.

Courtship display: specific bird behavior intended to attract a mate or to bond with a mate when both sexes display together.

Fledgling: chicks that have started leaving the nest for short periods, or have just left the nest; usually still getting parental care; starting to fly.

Habitat: the natural home of a living organism considered to have four elements: food, water, shelter and space.

Incubate: to sit on eggs in order to keep them warm and bring them to hatching.

Migratory: seasonal movement of animals from one region to another.

Plumage: a bird's feathers, including the colors and patterns.

Common types of bird nests:

Bracket nest: a nest built against a cliff or wall usually cup shaped.

Burrow nest: a hole or excavation in the ground or dirt cliff.

Cavity nest: a nest in a hollowed out opening in the trunk of a tree.

Cup nest: a cup-shaped nest; the outside is made with thick materials and the inside is usually soft to protect the eggs.

Pendant nest: a nest built into a pendant shape usually suspended from a small tree branch.

Platform nest: a nest that is mostly flat and supported by tree limbs.

Scrape: a type of simple bird nest that is little more than a shallow depression on the ground.

Spherical nest: a nest built into a globe or ball shape with a single opening on one side.

