



Teacher Guide

UNIT 1 LESSON 4: BIRD NESTING

Themes

Nests are important structures for young survival. Nest types and materials vary widely depending on species and habitat.

Missouri Science Standards: LS1.B.1, LS2.A.2

Vocabulary



Clutch Size - The number of eggs laid in a single brood by a nesting pair of birds. Some species of birds will lay only one or two eggs while others will have clutch sizes to as many as 20.

Brood - The group of young produced or hatched at the same time. Some species of bird will only have one brood in a year while others may have multiple. When species have multiple broods, some will re-use the nest and others will make a completely new one.

Incubation - The act of sitting on the eggs to keep them warm to allow them to hatch.

Incubation Period - The period of time over which eggs are incubated by a parent. In general, birds do not begin incubating until the clutch is complete and the incubation period is defined as the period from the laying of the last egg of the clutch until that egg hatches.

Nestling Period - The number of days between hatching and leaving the nest or fledging.

Fledge - To leave the nest.

Brood Parasitism - A form of social parasitism practiced by certain birds, such as cuckoos and cowbirds, in which eggs are laid in the nests of other birds, causing them to be hatched and the young reared by the hosts, often at the cost of the hosts' own young.

Parasitism - A type of symbiotic relationship between two species in which one member, the parasite, benefits at the expense of the other, the host, sometimes without killing the host organism.

Common Misconceptions to Watch Out For:



- **Birds use nests all year long.** Birds only use nests as a place to incubate eggs and raise young. Once chicks fledge, adults and young do not typically continue to use the nest. However, some birds will return to the same general areas to nest year after year.
- **Cowbirds are a pest species that should be eliminated.** Cowbirds are a brood parasite, meaning they lay their eggs in nests of other species. Baby cowbirds grow fast and can crowd out other chicks. This is an example of a species using an alternative reproductive strategy. Cowbirds are native to the United States and, therefore, are protected by law. It is illegal to harm them. Some birds are able to recognize and reject cowbird eggs.
- **Two parents are needed to raise the young.** In many birds like hummingbirds and woodcock, the female raises the young all by herself. In other birds like crows and blue jays, parents recruit nannies, usually former offspring, to help protect and feed the young. There is a lot of variability on how and who raises the young and makes the nest based on species and individuals.

Video 1: All About Bird Nests

Video Description: This video lesson covers why birds make nests, the nesting cycle, and brood parasitism. The connection between nest type and habitat is emphasized. Video is made by the Missouri River Bird Observatory (MRBO).

Follow- up Questions:

1. Why do birds make nests?
2. Name the five main stages of the nesting cycle.
3. What is it called when a species of bird lays their eggs in another bird's nest to raise them as their own, such as the Brown-headed Cowbird?
4. Does this mean the Brown-headed Cowbird is a pest species? Why or why not?
5. Fill in the blank. When the baby birds leave the nest it is called _____.



Video 2: Eight Main Types of Nests

Video Description: This video is a clip from MRBO webinar, "Bird Nesting: Family Edition" and it covers the different nest types and gives examples of each. Watch from 5:47 to 32:44.

Follow- up Questions:

1. What type of nest does a Killdeer make?
2. What is the main material a Barn Swallow uses to make its nest?
3. True or False? The only group of birds that nest in cavities are woodpeckers.

Activity: Build a Bird Nest

Activity Summary: Students will gain appreciation for the skill and work required to make a well-structured bird nest by taking on the role of bird parent to construct their own nest using the materials they have at hand. They will then put their nest through a few tests to determine the structural integrity and quality of their nest for maximum egg and nestling survival.

Teacher Notes:

- Link to PBS Video "The Structural Engineering of Nests" described in instructions: <https://kmos.pbslearningmedia.org/resource/nat15.sci.lisci.structnest/the-structural-engineering-of-nests/>

Video 3: Hummingbird: Surveyor, Architect, and Builder

Video Description: Watch the busy hummingbird craft the perfect nest in this video from NATURE: Animal Homes. The female hummingbird plays the role of surveyor, architect, and builder in her effort to create a suitable home for her eggs and future chicks. Video is from PBS.

Video Link:

<https://kmos.pbslearningmedia.org/resource/nat15.sci.lisci.humming/hummingbird-surveyor-architect-and-builder/>



Teacher Notes:

- Video is 2 min and 28 sec in length.
- Even though the species mentioned and shown is an Anna's Hummingbird, the species most prevalently found in Missouri, the Ruby- throated Hummingbird, makes a very similar nest and has a similar process.

Follow- up Questions:

1. What materials does the hummingbird use to make her nest?
2. What "tools" does the hummingbird use to make the nest?
3. Where is the nest located? In what habitat?

Concluding Questions/Assessment

*Student worksheet included in packet.

1. What does the nest provide the eggs and the young to better help them survive?
2. Describe the nest cycle. What are the four main stages and what happens during each?
3. What is brood parasitism? Give an example.
4. List five materials birds use to make their nests and the nest type that might best utilize that material.
5. From your own experience, what are the challenges of making a structurally sound nest?

