

Owl Pellets



Grade Level: 2nd to 6th

Prep time: 10-15 minutes

Group Size: Any

Activity Time: 30-60 minutes

Program type: Indoor

Program Overview

Owls are one of the most fascinating nocturnal predators. They are also a unique bird of prey with specialized adaptations. Instructors can use this activity to teach students about birds of prey, nocturnal animals, adaptations, and food chains.

Objective

Students will learn about owls, their adaptations and owl pellets. Students will make observations and investigate owl pellets to produce evidence of what an owl eats.

Supports the Next Generation Science Standards

LS1.A: Structure and Function: Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.

5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers and the environment.

MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

After pellet dissection and putting together skeletons, educators should lead discussion of possible food chains that include owls, rodents, what they eat and decomposers that eat the hair and bones in pellets.

Materials

- Owl Pellets
- Bone Identification Sheets
- Paper Plates, Paper towels or construction paper
- Toothpicks or tweezers (optional)
- Sandwich baggies (optional)
- Owl pellet booklet or Owl Pellet Observation sheets (optional)

Program Outline

Introduction: Explain goal is to learn about owls, their pellets and dissect one.

1. Watch video where students learn about owl adaptations, meet a live permanently injured owl and how to dissect an owl pellet.
2. Discuss procedures for dissecting the owl pellet and hand out materials (owl pellets, bone id sheets, paper plates or towels, toothpicks). Each student can have their own pellet or you can divide them into partners or small groups. Remind students of safe practices while dissecting, no eating or drinking, clean desk/table when finished and wash hands when finished. (*Note: We use purchased owl pellets from www.pelletsinc.com These are collected and sanitized before shipping).
3. Optional: hand out owl pellet booklet or owl pellet observation sheets for students to use and record their findings during dissection.
4. Give students time to dissect their pellets, match bones to id sheets, and fill out booklet or observation sheet. Spend as much time as needed or students are interested in dissecting. (*Note: having students dissect their pellet on a paper plate or towel or construction paper makes clean up easier)
5. When students are finished with dissection, they can keep bones or pieces if wanted. Use sandwich baggies to send them home. Clean up work stations and wash hands. (*Note: you can also have students glue bones to construction paper or note cards)

Wrap-up

Discuss students' findings from their pellets and compare with others what types of animal bones they found. Discuss what other information they can learn such as habits of owls, where they may hunt or live, how much they eat and what role they play in the food chain.

Background Information

Owls are a nocturnal bird of prey, which means they must kill and eat other animals to survive. Owls consume a large variety of prey including shrews, owls, mice, moles, small birds, lizards, frogs, bats, grasshoppers, and insects. Owls are very opportunistic eaters that typically hunt at night or twilight hours for their prey. Their keen eyesight and sensitive hearing help owls locate their prey while hunting. Most owls will hunt from a perch, listening and looking for signs of food. They will then swoop down with open wings, and outstretched talons. Their specialized feathers allow them to fly nearly silent as they ambush their prey.

Once an owl has caught its prey, it uses its sharp beak to tear chunks off and begins to swallow its prey whole! After being swallowed, the prey begins its journey down the esophagus to the proventriculus, where enzymes, acids and fluids aid in the first steps of digestion. After being broken down in the proventriculus, the prey then travels to the ventriculus, otherwise known as the gizzard. In the gizzard, the process is briefly stopped as the gizzard helps to sort the digestible meat and indigestible (bones, feathers, scales, fur) parts. The indigestible remains create a pellet. The digestible food will then continue to travel through the intestines to the vent.

The indigestible food remains in the gizzard for several hours, being compressed, before being regurgitated by the owl. Before an owl consumes another meal, it must regurgitate the indigestible parts of its previous meal. An owl's pellet cycle is regular and often done at a favorite roosting spot. Owls are not the only birds to pellet, but do tend to have larger pellets due to less acidic digestive juices and the lack of a crop (food storage organ). Other raptors including, hawks, eagles and falcons also pellet as well as other birds such as robins.

Resources

www.woodburyparks.org

www.soarraptors.org

www.owlpages.com/owls/

www.allaboutbirds.org

www.pelletsinc.com

www.fishwildlife.org/projectwild/step-stem-and-wild-work/owl-pellets

www.kidswings.com/virtual-pellet/