

Owl Pellet Dissection

Owls, like all birds, do not contain teeth, so they cannot chew their food. Instead, they swallow their food whole but cannot digest fur or bone. These undigested parts are regurgitated in the form of a pellet. Owls will typically eat between 3 -4 prey items a night, so pellets may contain more than one skull. It generally takes about six hours for an owl to form a pellet and they usually produce two pellets a night. Barn owls common diet includes mostly voles, shrews, rats, and mice. Occasionally, they will eat small birds, bats, and amphibians.

In this lab, you will dissect an owl pellet and use the identification charts to identify the animals in owl pellet. You will then create an ecological pyramid, using the owl, its prey, and the diet the prey usually feeds upon.

Materials

- Owl Pellet
- Dissection Kit
- Magnifying Glass
- Dissection Microscope
- Identification Charts
- Dissection Tray

Directions

- Working with a partner, collect a magnifying glass, dissection kit, dissection tray, and an owl pellet.
- Remove the aluminum foil, to expose your owl pellet.
- Using your fingers and the tweezers, gently remove the fur from the owl pellet, until you reach a skull or bone.
- Set the skull(s) and bones aside.
- Use the identification charts to identify the organism. Pay particular attention to the teeth and the features on the skull.
- Use the magnifying glass to help examine the teeth. You may also use one the dissection microscopes to help examine the teeth.
- Complete the information below and write down the identity of the prey organism.
- Use your prey organism and items from their diet to complete the ecological pyramid, with the owl being the tertiary consumer.

Owl Pellet Information

Size of owl pellet (mm): _____

Presence of fur or feathers: _____

Number of skulls in pellet: _____

Size of skull (s) (mm): _____

Sketch of Skull – Top View



Sketch of Skull – Bottom View



Sketch of Teeth – Bottom view



Sketch of Jaws – Side View



1. Where are the eyes located in the skull? (Side or front): _____
2. What does the location of the eyes tell you about the animals? _____

3. What type of teeth are present in the skull? (incisors, canines, premolars, molars)

4. What is the dental formula for the upper skull? (This is usually written for just one side, beginning with the incisors) _____
5. Based on the teeth, what can you determine about the usual diet of this organism? _____

6. What other bones can you identify in the pellet? _____

7. Identity of your prey animal: _____

3D Ecological Pyramid

Create a 3D pyramid that incorporates information on each of the three sides of the pyramid.

One side should feature the 10% rule. Another side should display the following terms: producer; primary consumer; secondary consumer; and top consumer. The final side should include the names of the organisms in the owl food chain.

Be Colorful!

