

Digging into Different Digestion: An Owl Pellet Activity

The following activity was designed to parallel the human body system chapter on digestion. The students reviewed the human digestive system parts, functions, and limitations. I prepared a powerpoint illustrating some background information and video about owls and their predatory behavior. The idea behind this activity is to encourage students to think about why the owl's digestive system is different from that of humans, as well as why owls excrete the pellets of bone and hair rather than digest it.

This lesson plan was designed for a fifth grade class with 18 students. The lesson takes one 90-minute science period to dissect the pellet and one 45-minute period to reconstruct the prey bones. The following materials listed are for each student to dissect his or her own pellet.

Materials:

- 18 – Pre-sterilized owl pellets
- 18 – Specimen jars
- 18 – Paper plates
- 18 - Forceps
- Box of toothpicks
- Magnifying glasses
- Newspaper for desks
- Black card stock
- Glue sticks

Activity:

This lesson plan follows multiple lessons on the human digestive system. I started the lesson by reviewing all the major components of the digestive system. I named an organ of the digestive system, and I took volunteers to discuss the major function of that particular organ. Once a correct description was given, I encouraged transition to the next organ that food would encounter as it travels through the digestive system. The purpose of this discussion is not only to review but also to encourage students to think about how the system works as a whole and to think about why we eat what we eat.

I then transitioned to owls. I asked the students to “braindrain” to a partner about everything they knew about owls. Answers varied but included nocturnal, bird, talons, big, and flying. Next I encouraged students to think about what owls may eat. Students guessed many different species but most included rodent species.

I then started talking about how an owl's digestive system varies from a human's digestive system. We talked about the extra glandular stomach and the processes it performs including the formation of pellets. I let the students guess what they thought would not be digested and told them that they would be able to investigate a real owl pellet to determine the answer.

The instructions are very simple for this activity. I informed the students about cleanliness and carefulness while dissecting the pellet. The forceps are used to pull apart the pellet, and the toothpicks are used to clean the components inside the pellet. Immediately after the activity began, students found bones, so at this point, I stressed

the importance of keeping the bones intact. Bones are collected in the specimen jar and the activity continued until each student has completed dissecting the entire pellet.

At the end, I collected all the students' samples, and everyone cleaned up. We concluded the activity by talking about the reasons behind the owl's digestive system. This discussion included talking about hunting prey and the speediness of the whole process. I showed a video to drive the point home. The bones can be assembled on the concurrent science class period or saved to use for another lesson.