



### Observation Exercises for Everyone

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### ~ Dinner with an Owl: Exploring Owl Pellets ~

**Purpose:** This activity is appropriate for 5<sup>th</sup> thru 8<sup>th</sup> grade students. Owl pellets are regurgitated indigestible materials from the owl's last meal. When ordered from online suppliers, pellets are usually those of Barn Owls. They come sterilized, neatly packaged, and are safe to handle.

Lessons from dissecting owl pellets:

- Gain a practical experience dissecting a specimen from nature
- Use drawing and note-taking to record information
- Practice documenting *with accuracy*
- Learn about bone structure of the small animals that were part of the Barn Owl's meal.
- Consider how the bones found in the dissection might relate to human anatomy
- Have fun!



- barn owl -

Observational drawing and taking notes are key parts of this activity. Photography can provide an additional way to record the dissection process. Photos can be printed out and added to the student's other documentation. However, photography must not take the place of drawing and note-taking.

**Meets these science standards:**

**Science and Engineering Practices**—Construct explanations and discover solutions:

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Have students consider:

1. How can an owl digest its meal if it's swallowed whole?
2. What happens in digestion, if the owl ingests both digestible and indigestible parts of its meal all at once?
3. Plan and carry out an investigation collaboratively. Plan together how the students will approach dissecting their own owl pellet and compare their findings. Have students share their experiences, their drawings and notes, and any resulting realizations and discoveries.

**Disciplinary Core Ideas**—Interdependent Relationships in Ecosystems:

Students will learn about the dependence of owls on other organisms for food and will discover first-hand what other animals make a meal. What parts of the owl's meal were digested and what parts were expelled? (Read about the [Owl Digestion Process](#))

**Visual arts standards:**

**Techniques and Application:**

1. Students perceive and respond to objects in nature
2. Representational drawing to record anatomy of small mammals
3. Bone shape and location of bones in the animal's skeleton
4. Students notice simple and complex form, color, texture, value, pattern, size and proportion.

**\*Note about safety:** Owl pellets purchased from one of the online suppliers (below) come heat-sterilized and are safe to handle without gloves, although you or your students may prefer to work with gloves. If a student accidentally puts a pellet or the contents of a pellet in his mouth, there will be no ill effects; however, you may prefer to have a bottle of antibacterial mouthwash on hand for rinsing.

**Materials:**

1. Owl pellets or owl pellet dissection kits; purchase in advance of class. There are many online suppliers of owl pellets and kits for classrooms. The pellets come heat-sterilized and are safe to handle. Many kits come with diagrams of several animal skeletons showing individual bones and their placement in the animal's skeletal structure.

Here below are a few suppliers:

- a. [Oregon Owl Pellets](#)
- b. [Home Science Tools](#)
- c. [Connecticut Valley Biological Supply](#)
- d. [Flinn Scientific](#)
- e. [Carolina Biological Supply](#)
- f. [Staples](#)

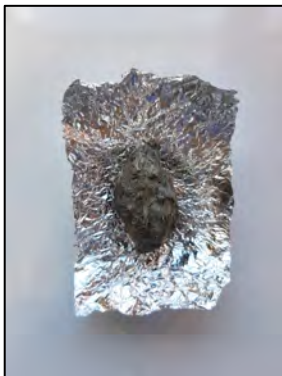


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2. Clean desk surfaces
3. Plates or trays for dissecting
4. Pairs of tweezers
5. Wooden toothpicks, teasing needles, or some other tool to tease apart the pellet
6. Owl pellet bone charts (from kits)
7. Small amount of water to help soften the pellet (optional)
8. Non-latex surgical gloves or dish-washing gloves (optional)
9. Sheets of paper for drawing, or a small field journal (a ringed sketchbook or small notebook)
10. Pencils, eraser
11. Magnifying glass (optional)

### Method:

1. Instruct your students how to handle their owl pellets. The contents of their pellets are small and fragile. Patience is important. They must observe and record information as accurately as possible while exploring their pellets.
2. Hand out to each student:
  - a. a prepared owl pellet
  - b. one pair of tweezers
  - c. one teasing needle, and
  - d. a pair of non-latex gloves. (These are optional.)
3. Have your students carefully unwrap and then take apart their pellets using the water as a softening agent, their tweezers, and teasing needles. Make sure they take accurate notes and visually record, *as accurately as possible*, the contents of their owl pellets. They can also add photographs to document their dissecting progress, if they want.



small owl pellet (~1")



moistened pellet



dissection in progress



completed dissection!

Many owl pellets can contain almost an entire skeleton, as the “animal meal” is often swallowed whole. There will not be enough time in class to find *every* tiny bone. The photo of the tray above (right) is shown here to illustrate the variety of bones that could be found in an owl pellet. (See also the following page.)

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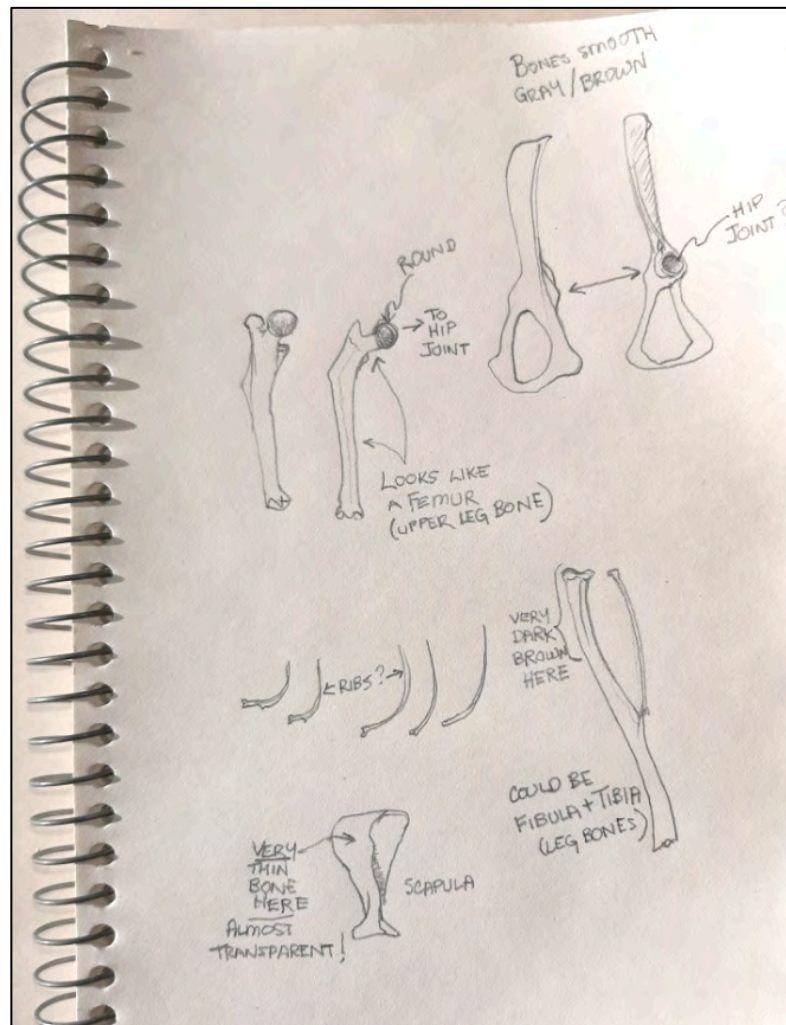


In this owl pellet, at least two partial animal skeletons were discovered.

The drawing portion of this activity is not about making beautiful works of art. The real lesson here is about accuracy of observation. Students will:

1. accurately record visually the details of the objects found in their owl pellets,
2. jot down additional descriptions, including color, texture of the pellet, bones, other animal/insect parts, and
3. make note of questions that arise during this process — these can be part of a later discussion in class.

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Very simple drawings showing found bones, simple descriptions of color, texture, and some “guesses” of what bones these are.

### Follow-up questions:

1. To what animal might the bones in your owl pellet belong?
2. What bone is that? (Choose one or two from various dissections.)
3. Where might it belong in the animal’s skeleton?
4. How do a bone’s form and shape inform its function?
5. How do these bones compare with your own bones?