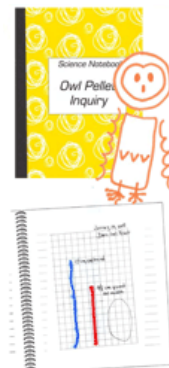


Science Notebook: An Owl Pellet Inquiry

This fun, hands-on introductory dissection is a great springboard for teaching the techniques of using a science notebook while having students engage in the [scientific practices](#) of asking questions, planning and carrying out investigations, analyzing and interpreting data, constructing explanations, and obtaining, evaluating, and communicating information..

Do you want to teach your students to think like scientists? Do you want to incorporate more inquiry and science notebooking in your classes? Then exploring owl pellets is the perfect project.



What are science notebooks?

Science notebooks are a record of scientific data, observations, and other information—and scientists value them. In the elementary classroom, science notebooks help students make sense of their observations and organize information. Notebooks are also convenient places for students to ask/record questions and make/record predictions, whether they do so using words or pictures or both. Spiral notebooks, marble composition notebooks, or folders with fasteners work very well. Just remember that it's important to secure the pages together in some way.

Let's talk a minute about notebook entries. For young students, entries may include a drawing, a word, a simple chart, and perhaps a few sentences. As students get older, expect more detailed drawings, longer descriptions, and more elaborate data tables, graphs, or charts.

Getting started with an owl pellet inquiry

Materials (starter list)

- [Owl Pellets](#)
- Science Notebook
- Centimeter Graph Paper
- Colored Pencils or Crayons
- Transparent Tape
- Yarn
- Scissors



Review the materials list. Colored pencils help students make accurate drawings. Younger children might prefer crayons. Yarn is a wonderful graphing tool and works well with graph paper. Notice that this is a starter list. You may also want to consider a hand lens, centimeter rulers, and other tools for your young scientists.

Asking questions: What do we know about owls?

Guide a class discussion about owls. Discuss physical characteristics, habitat, and food sources. Have students ask questions for which they want answers. Guide them, if necessary, to questions such as:

- What might owls eat?
- What do you know about owl habitat and/or physical characteristics that support your ideas about their diet?



Planning and Carrying Out Investigations: Investigating the wrapped pellet

Now, pass out the wrapped owl pellets and ask each student to hold the pellet **without unwrapping it**. Ask your students to consider what they know about owls. Then ask, "What do you expect to find inside this foil-wrapped package?" Have students record their responses in their science notebooks. Remind them to date their entries. You may want to use open-ended questions to encourage students to make rather specific predictions.

Here are some questions to help guide student responses. The idea is to get them thinking so that they can make predictions.

- What do you expect to find inside the pellet?
- What do you suppose the pellet will look like? Colors? Textures?

Planning and Carrying Out Investigations: Unwrap but keep intact

Now instruct students to unwrap their pellets, but **do not break the pellets apart**. Ask them to use supplied materials on their tables to discover all they can about the intact pellets. Have students record their findings in their science notebooks. Encourage informal sharing of ideas at each table. Students can gather data from the **unwrapped** pellets by doing any of the following activities.

- Wrap yarn around each pellet and measure the circumference of the pellet. Is there another way to record size?
- Compare sizes of all pellets. Make a bar graph using yarn and centimeter graph paper.
- Trace around each pellet on centimeter graph paper. Record length/width in centimeters or area in square centimeters. **Note:** Use student-generated rules to determine the method for counting and recording partial squares.

Your students may find other ways to gather data. Encourage them to think like scientists and find new ways to explore the unknown.

Planning and Carrying Out Investigations: Break apart the pellet and explore!

Now let your students explore the interior of the pellet. Encourage them to find out all they can. **Note:** At this point, students are conducting their own investigation and are **not** using bone charts. Allow students the luxury of grouping/classifying bones using student-generated rules. Looking at bones without the bone chart helps them carefully consider **form** and **function** instead of simply matching bones to the diagram.

Use open-ended questions to encourage thoughtful grouping of the bones.

- How are the bones alike? How are they different?
- Do any characteristics of this group of bones provide clues about the animal from which they originated? Look at the evidence.
- To what animal might these bones belong? What evidence supports your idea?

Analyzing and Interpreting Data: What do you predict?

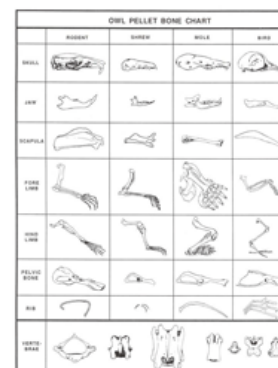
Have students record observations in their science notebooks. After allowing ample time for student-generated investigation and grouping of bones, ask students to make predictions.

What animal might these bones belong to? Are there bones of more than one animal? What evidence supports your predictions? Have students record their ideas.

Constructing Explanations: Chart a course

At this point, give each student a [bone chart](#). Have your young scientists actively compare their groupings to the chart. Encourage them to work like scientists to identify the contents of the pellets.

After comparing their groupings to the chart, students can use the chart to make any necessary regrouping of individual bones. They then record these observations in their science notebooks, or on charts or blackline record sheets provided for that purpose. Simply staple, glue, or tape charts or record sheets into the science notebooks.



Obtaining, Evaluating, and Communicating Information: Questions answered

Encourage students to look closely at the relationship of form and function (e.g., ball/socket joint, size and thickness of hind limb bones), and how this might relate to the animal's movement. Allow ample time for them to complete the investigation and record the findings in their science notebooks.

Extended Activities

There are many opportunities for extending the lesson. Time permitting, students may glue the bones on heavy paper, or perhaps in a petri dish or CD case, as they reconstruct the animal skeleton as much as possible. Younger students may extend the lesson by gluing together an imaginary animal and describing how that animal moves, what the animal eats, etc. Using what they now know about form and function, the children can choose bones that enable the imaginary animal to move as described.

Consider other lessons you can teach using the gathered information and/or science notebooks. For

Get creative! There is no better tool for young scientists than a great investigation paired with a place to record what they see, think, and question.

Learn more

Learn more about our extensive selection of owl pellets and resources at www.carolina.com/preserved, where you will also find secure online shopping, product information, classroom resources, activities, and additional teaching tips.



Related Resources

[Owl Pellet Dissection](#)

[It's All About Owls](#)

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