

# Great Horned Owl Adaptation Activity

**Subject:** Great horned owl adaptations

**Duration:** 45min to 1 hour

**5E:** Engage and Explain

**Group Size:** Individual

**NGSS Performance Expectation:** 4-LS-1 and 4-LS-2

**Disciplinary Core Idea:**

- *LS1.A: Structure and Function-* Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.
- *LS1.D: Information Processing-* Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions.

**Science & Engineering Practices:** Engaging in Argument from Evidence- Construct an argument with evidence, data, and/or a model.

**Cross-Cutting Concepts:** Systems and System Models- A system can be described in terms of its components and their interactions.

**Common Core:** CCSS.ELA-LITERACY.RI.4.2- Determine the main idea of a text and explain how it is supported by key details; summarize the text.

**Key Vocabulary:** adaptation, nocturnal, camouflage, structural versus behavioral adaptations

**Overview:** Students familiarize themselves with the ways the great horned owl is able to survive in its habitat using its adaptations. They engage with a discussion about adaptations, and explore further information through a powerpoint to learn about each adaptation. The adaptation powerpoint includes guiding questions, facts, visuals, and videos. A post-discussion helps students elaborate about how adaptations can work in tandem with each other, and the differences between behavioral and structural adaptations.

**Method:** Teacher/leader leads a pre-discussion about adaptations, then students use a powerpoint to learn more about each adaptation. Along the way they fill out their owl adaptation sheet with the information they learn. The teacher/leader leads a post-activity discussion about how different adaptations work together.

**Materials:** Computer to look at Adaptation Powerpoint and Owl Adaptation Sheet (blank) for students to fill out

**Preparation:**

- Adaptation powerpoint to see the cards, visuals, and videos all in one spot (no printing required)
- Print out Owl Adaptation Sheet to take fill out

**Procedure:**

1. Introduction (5-10 minutes)
  - a. Tell students: "If you are comfortable doing so, close your eyes. Imagine that you are in the ocean and swimming all around you there are all kinds of underwater animals. What are some of the things that underwater animals have or do that help them live in the ocean? (fins, tentacles, shells, blowhole, gills) All of those things help the animal live in their habitat - those things are called *adaptations!*"
  - b. Tell students "*Today we are going to be learning about the special adaptations that make great horned owls excellent predators.*"
2. Ask the students : What are some parts of the owl that you can observe? What adaptations do you think it has?
  - a. Camouflage, nocturnal, feet/talons, feathers, eyes, ears (hearing), beak, neck rotation, hoots/calls
  - b. Share the *Great Horned Owl Adaptation* sheet so that students can fill it out at the adaptation stations.
3. Tell students "*Today you will become experts on great horned owl adaptations. You can take notes along the way using the blank adaptation sheet. Read the questions on the powerpoint and discuss your ideas. Use the pictures and videos to help guide your answers. Don't forget to write down some notes on the owl adaptation sheet.*"
4. Wrap-Up Discussion
  - a. Tell students: "*Some adaptations are structural and some are behavioral. Structural adaptations are things that an animal has on its body and behavioral adaptations are things that an animal does to survive. What is an example of a structural adaptation that a great horned owl has? What about a behavioral adaptation?*"
    - i. Go through each adaptation and have students sort them into either Behavioral and Structural adaptations.
  - b. Optional further discussion
    - i. How might the adaptations of the great horned owl differ from the adaptations a hawk (or other predatory bird that hunts in the daytime) might have?
    - ii. What do you think is the owl's best adaptation and why?