

PINE CONE OWLS

Flagellate plants have existed on our planet for a long time (~300 million years) and include approximately 30,000 species of bryophytes, lycophytes, ferns, and gymnosperms. These plants offer some important clues on how plants evolve and adapt. There are several ways to classify flagellate plants based on their genetic and morphological traits but one of their most unique features is the absence of flowers.

This activity was developed as an informal learning experience for 2nd grade students who participated in an optional afterschool enrichment activity offered by the school. It uses a standard activity available on the internet – making an owl from a pinecone – and provides context for students to learn about pine trees and owls.

GRADE LEVEL

- Elementary (K-2)

DURATION

- 45-60 minutes

LEARNING OBJECTIVES

- Discuss the importance of pine trees and plants in general to humankind
- Analyze pinecone structure and function
- Describe owls and what owls are present in your local area

CURRICULAR CONNECTIONS

- Art (crafting a pine cone owl)
- Biology (plant reproductive strategies)

INTRODUCTION

- If possible, have the children find a pine tree on campus.
- Ask children to explain how they found the tree, or how they would look for one. What parts of the tree call their attention or what are they looking for to find a pine tree?
- Show different parts of a pine tree to the children: bark, leaves, and cones (either real material if you can get them from a nearby tree, or photos).
- Discuss what seeds are and why they're important for plants – pine cones are where these particular plants make their seeds until they are ready to become new plants.
- Discuss why pines are important trees (they are habitats for many animals... what animals might live in a pine tree?)
- Use this as a transition for the owl craft activity.
- Ask the students if they've ever seen an owl – show pictures of some common owls in your area.

MATERIALS NEEDED

- Pine cones (collected with permission, or purchased)
- Pine bark (if obtainable)
- Pine leaves (if obtainable)
- Felt in various colors (including white, beige, and orange for a reasonably realistic owl)
- Cotton balls/cotton
- Googly eyes
- Glue
- Scissors

MEASURING ACTIVITY

- Play sounds of native owls
- Show a model of a snow owl (native owls, native species: barred owl, barn owl)
- Give a pine cone to each child
- Provide containers with different sizes of googly eyes, felt, and cotton
- Ask children to create their own unique snow owl to take home

REFLECTION

- Ask the students to reflect on animal habitats and why it's important to protect plants like pine trees, which provide habitat and food for many animals.



Model for pine cone owl. Image is from: <https://www.easypeasyandfun.com/pinecone-winter-owls-craft/> and full instructions are available there.

Original activity writeup by Tredina Sheppard, PK Yonge Developmental Research School, Gainesville, FL; modified by Emily Sessa, New York Botanical Garden.