

# Fabulous Feathers Activity

## Theme

Feathers are necessary for flight, insulation, camouflage, and behavior rituals.

## Learning Objectives

Participants will understand:

- The importance of regulations that govern feathers.
- The activities of preening and molting.
- How feathers maintain their shape.

## Vocabulary

barb

barbules

flight feather

molting

preening

primary feather

secondary feather

## Introduction

Please refer to the Awesome Adaptation Introduction on feathers.

## Activity: Fabulous Feathers

**Materials Required:** A variety of feathers from the feather display or feathers from the Awesome Adaptations box.

## Steps

Do as many of these activities as time allows.

- Comparison of Peregrine feathers to Eurasian Eagle Owl Feathers.
  - Get a Peregrine feather and a Eurasian Eagle Owl feather from the Awesome Adaptations box
  - Call 2 participants to the front of the room to hold the feathers.
  - Spend a moment letting participants know that people are not allowed to possess any bird of prey or part of a bird except by federal permit.
  - Ask participants what that means if they find a dead owl by the side of the road?
  - Engage the feather holding participants in a feather waving contest. Have the participants be very quiet so they can listen to the sounds made by the feathers. Have the feather wavers wave each feather singly.
  - Designate 2 or more participants as *scientists*, and ask them to note differences between the feathers. Give them 1-2 minutes to examine the feathers. Have them report any differences, and ask the other

- participants if any of the differences noted can explain the noise difference.
- Collect a variety of responses and guide the participants to the adaptation of tight feathers and fringy feathers.
- Comparing feathers from the Ecology Room to the Condor feathers in the Art Gallery
    - Have participants bring feathers in to the room from the feather display, stand under the Condors, and by comparing their feather to the Condor feathers, identify their feathers as:
      - Primary, Secondary, Tail,
      - For Primary feathers, to which wing does the feather belong.
  - Feather activities in the Ecology or the Art Gallery
    - Have the participants obtain a feather from the feather display.
    - Ask the participant what are feathers for? Have a group brainstorm why birds have feathers. Some answers could be:
      - To help a bird fly.
      - For camouflage.
      - To help tell adults from juveniles.
    - Have the participants obtain a feather from the feather display. Ask the participants:
      - Can you take this feather home?
      - Is it legal for you to take feathers from a dead bird of prey?
    - Discuss that it is illegal to possess a bird of prey or any part of a bird of prey without a special permit.
    - Ask the participant to gently and very slowly pull the barbs apart.
      - They should feel the resistance of the barbules letting go of each other.
      - If they look carefully, the participant can see the barbules.
    - Ask the participant why a parted feather is not good for the bird, and how would the bird fix this problem.
      - Participants should indicate preening is the solution.
      - Help the participants to understand the importance of preening in maintaining the health of the bird.
    - Ask the participants:
      - If they have ever lost a tooth? (molting)
      - Do birds ever lose feathers? (molting)
      - What happens if a bird loses a primary feather on the right wing? (maintain balance by molting same feather on other wing)

### **Following and Test for Understanding**

Have participants view the mounted birds in the Conservation Room and the Ecology Room and point to the location of the following feathers:

- primary, secondary, flight, coverts