

Title: Beak Adaptations (A.K.A. Grocery Bills)

Objective: Identify how bird beaks differ and connect how that adaptation is related to the food the bird eats.

Time: 10-15 minutes

Materials Needed: Pictures of birds (found at jeffersfoundation.org)

Greeting

Theme: Birds

Topic: Bird Beaks

Suggested Grade Level: 3-5

Indoors or Outdoors: Either

Directions:

1. Display the labelled bird pictures and go through the discussion questions below.
2. For each bird, brainstorm an action to show its beak structure and how it uses its beak to get food. (i.e. Pelican- large scooping motion with arm, Woodpecker- one finger taps against opposite open hand.) Agree on a specific action for each species of bird.
3. Each student chooses to be one of the birds and pantomimes its beak function.
4. Have students walk around the room, acting out their beak adaptation, and greeting other students by saying, “*Good morning, Pelican!*” or “*Good morning, Hummingbird!*”, etc.

Discussion Questions:

1. Which physical structures differ among these birds?
2. Name each bird one at a time and just looking at the beak structure, tell what it might eat. Explain how the beak adaptation helps it get its food.

Extension:

Notice different bird feet/claws and what they are used for and create an action to show this adaptation. (webbed, talons, perching, climbing, etc.)

Science and Engineering Practices:

2. Developing and using models; 6. Constructing explanations (science).

Crosscutting Concepts:

6. Structure and function.

Disciplinary Core Ideas:

Life Sciences: LS1: From molecules to organisms: Structures and processes; LS 3: Heredity: Inheritance and variation of traits.

Background Information:

- The structure of a bird's beak is adapted to its method of feeding. Varieties include chisel beaks, probing beaks, thick beaks to crack seeds/nuts, scoop bills, and more.
- Hummingbirds' beaks are long and needle-like to swoop into flowers and sip out nectar; Woodpeckers have chisel like, strong, thin beaks to peck through wood to find bugs; Eagles/Falcons/Hawks are meat eaters and have hooked beaks to tear at their prey; Pelicans have pouched, large curved bills to catch and hold fish; Grosbeaks/Sparrows/Goldfinch have hard, cone shaped beaks to help them crack open seeds; Herons' long pointed beaks help them grab fish.
- The size and shape of a bird's claws/feet vary according to the ways of life of different species. Common variations include grasping foot, scratching foot, swimming foot, perching foot, running foot and climbing foot.

Additional Resources:

- The remarkable adaptations of birds to their environment, National Park Service: <https://www.nps.gov/cabr/blogs/the-remarkable-adaptations-of-birds-to-their-environment.htm>
- *Wild About Minnesota Birds* by Adele Porter
- *What It's Like To Be A Bird* by David Allen Sibley

Correlates with:

Activity - I'm Thinking of a Bird Game (p. 50)

Interdisciplinary Lesson - Create a Bird (p. 90)



Eagle



Evening Grosbeak



Great Blue Heron



Pelican



Pileated Woodpecker



Ruby-Throated Hummingbird