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

Objective: Identify how bird beaks differ and connect how that adaptation is re-

lated 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:

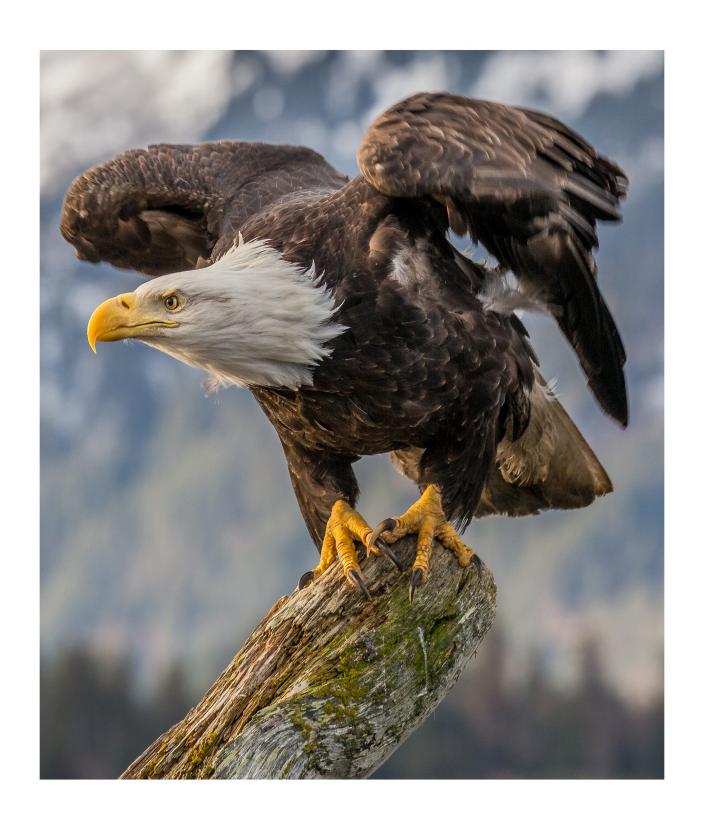
- The structure of a bird's beak is adapted to its method of feeding. Varieties include chisel beaks, probing beaks, thick beaks to crack seeds/nuts, scoop bills, and more.
- Hummingbirds' beaks are long and needle-like to swoop into flowers and sip out nectar; Woodpeckers have chisel like, strong, thin 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:

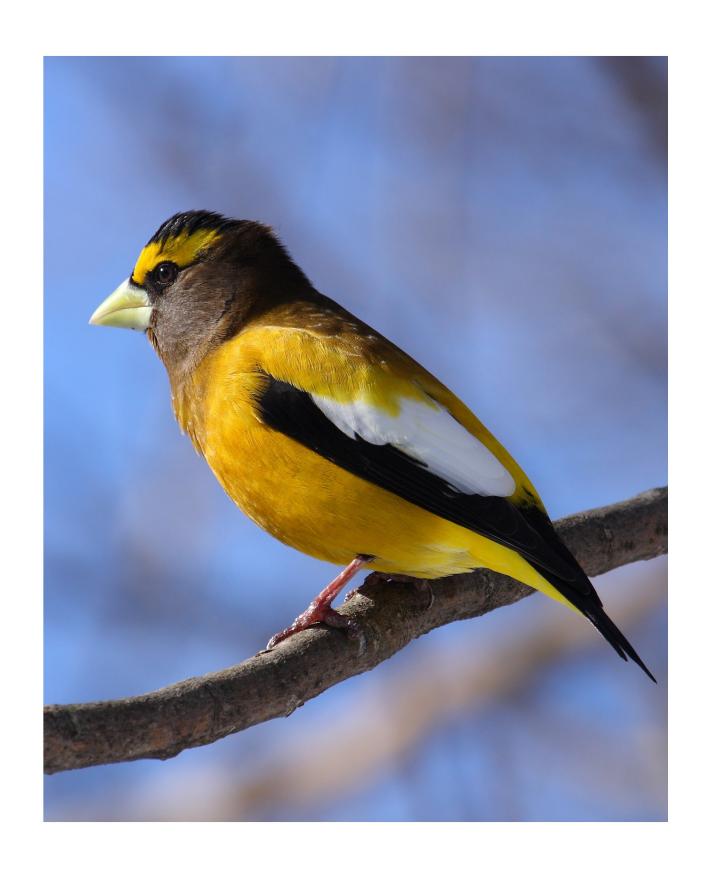
- The remarkable adaptations of birds to their environment, National Park Service: https://www.nps.gov/cabr/blogs/the-remarkable-adaptations-of-birds-to-their-environment.htm
- Wild About Minnesota Birds by Adele Porter
- What It's Like To Be A Bird by David Allen Sibley

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