

OIMB GK12 CURRICULUM

2nd Grade

45 minutes

SHOREBIRDS, BEAKS AND FEET

Oregon Science Content Standards:

- 2.1 Structure and Function: Living and non-living things vary throughout the natural world.
- 2.1L.1 Compare and contrast characteristics and behaviors of plants and animals and the environments where they live.
- 2.3 Scientific Inquiry: Scientific inquiry is a process used to explore the natural world using evidence from observations.
- 2.3S.2 Make predictions about living and non-living things and events in the environment based on observed patterns.

Ocean Literacy Essential Principles:

- 5. The ocean supports a great diversity of life and ecosystems

Goals:

- To introduce adaptations that all birds have.
- To introduce shore birds.
- To have students predict aspects of a bird's lifestyle from its morphology.

Concepts:

- Most birds have wings with feathers, and hollow bones to help them fly.
- Shorebirds generally live near wetland and coastal areas and often undertake large seasonal migrations.
- Shorebirds often have long bills, legs and toes to help forage in mudflats and beaches.
- Birds have different kinds of beaks for eating different things.
- A bird's beak gives us clues as to what it eats.
- A bird's feet gives us clues as to where the bird feeds and lives.

Materials:

- Pictures of all sorts of birds showing a variety of beaks and feet
- Design a bird worksheet
- Beak comparisons: <http://www.backyardnature.net/birdbeak.htm>
<http://en.wikipedia.org/wiki/Beak>
- Feet comparisons: http://www.infovisual.info/02/061_en.html

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Lesson Plan:

1. Start by asking students to think about and talk to each other about special adaptations that birds have. Direct the conversation to include wings to fly and hollow bones for light bodies.
2. Discuss how shore birds live along coastal and wetland areas. Discuss how birds seen foraging on beaches and in wetlands often have long, skinny legs and beaks. Ask the class what they think these characteristics might be adaptations for (wade through water and poke into the sand and mud). Ask if students have noticed different birds at different times of the year? Or times when there are few birds? Discuss migrations.
3. Ask if all birds eat the same thing. Ask the students if they think they could tell, just by looking at a bird's beak, what it eats. Show pictures of different birds and ask the students to guess what each bird eats. An excellent resource with pictures of different beak types and descriptions of what type of foraging each beak is adapted for is found online at Backyard Nature (<http://www.backyardnature.net/birdbeak.htm>). An additional resource is <http://en.wikipedia.org/wiki/Beak>.
4. Repeat this process looking at the feet of birds. Ask for the students' hypotheses about what the birds eat and where they live. (http://www.infovisual.info/02/061_en.html)
5. Put the students into groups and give them a picture of a bird and have them, as a group, decide what it might eat and where it might live and feed. Then have the students each design their own bird giving it a special beak and feet. Have them fill out the worksheet and then present their bird to the class, telling everyone what their bird eats, where it lives, and why.

Assessment: class discussion, the design a bird worksheet and student presentation

GK12 Fellow: Maya Wolf

Your Name _____

Your Bird's Name _____

Draw and color your bird here:

Draw a close up of your bird's beak:

What does this bird eat?

Draw a close up of your bird's feet:

Where do you think this bird lives/feeds? Does it use its feet to help it get or eat food?