

OIMB GK12 CURRICULUM

6th grade

45 minutes + additional research time

SEABIRDS AND ISLANDS, FIELD GUIDE

Oregon Science Content Standards:

6.2L.2 Explain how individual organisms and populations in an ecosystem interact and how changes in populations are related to resources.

Ocean Literacy Principles:

5. The Ocean supports a great diversity of life and ecosystems

Goals:

- To familiarize students with seabirds and how they feed, breed, migrate and utilize islands.
- To realize there are many types of seabirds living off Oregon's coast, some of which nest on our ocean cliffs and offshore rocky islands.
- To have students gain experience using field guides and to construct their own.

Concepts:

- Many seabirds rely on island for resting and nesting areas.
- Many seabirds migrate to reach feeding and/or breeding areas.
- From beaks to feet to wing shapes to colors, birds' bodies are adapted to their particular habitat and lifestyle.

Materials:

- Videos of birds feeding, nesting, etc. (Some on-line links are provided in the 'lesson plan' section. You can also use videos from other sources such as Blue Planet or Planet Earth. Videos do not have to be of Oregon birds, since they are to test students' observational skills.)
- Optional: Stuffed birds (available from OIMB)
- Field Guide template, reproduce 6-8 pages per student
- Colored pencils for each group of 6-8 students
- Bird books, a dozen or as many as possible
- Optional: access to the internet for research

Background:

There are many seabirds that live off the Oregon coast. Many of them migrate, usually in order to follow their food. Birds such as geese, murre, terns, and puffins live in Oregon during the late spring, summer, and early fall, and then migrate elsewhere. The bird with the longest

OIMB GK12 CURRICULUM

migration in the world is the Arctic Tern, which migrates from the Arctic all the way to Antarctica every year, a round trip of over 44,000 miles. This Arctic Tern only lands once every 1-3 years in order to mate. Even though this bird doesn't live in Oregon, it demonstrates how well adapted some birds are to living in the air without a permanent home on land or water. Some birds, such as the pelagic cormorant, are excellent swimmers, and get their food by diving underwater and 'swimming' around to catch fish. This species of bird can often be found nesting on the sides of Oregon ocean cliffs. Other seabirds, such as Leach's storm petrel, nest in burrows that they make in the dirt on top of Oregon islands. Seabirds have a wide range of nesting behavior and migratory patterns.

Lesson Plan:

1. Begin the lesson with a short video clip that shows seabirds roosting on cliffs and catching fish by the shore. Explain that islands provide safe places to roost (many islands are inaccessible to predators), and that the coastal waters serve as fishing grounds.
2. Ask the class which seabirds they think live or spend time along Oregon. Write their list on the board.
3. Explain that many birds live off Oregon (see Background).
4. Ask the students what kind of information they think is important when describing a bird (include appearance, diet, foraging behavior--how it hunts, migration and nesting locations).
5. Explain that this information is what scientists try to find out when they discover a bird, and what is provided in guide books.
6. Learn about a few specific birds by watching them on video.
 - have students write down observations about each bird
 - see how much can be learned about diet, migration and nesting by observing the birds
 - A good source for on-line videos is www.arkive.org Some examples are
 - Puffin:
<http://www.arkive.org/puffin/fratercula-arctica/>
 - Cormorant feeding its chick:
<http://www.arkive.org/cormorant/phalacrocorax-carbo/video-09.html>
 - Black-footed Albatross:
<http://www.arkive.org/black-footed-albatross/phoebastria-nigripes/>
 - Sooty Shearwater:
<http://www.arkive.org/sooty-shearwater/puffinus-griseus/>
7. After the videos are done, ask the students what they learned about each bird. Check their observations about diet, nesting behavior, etc.
8. Optional—show students stuffed seabirds, available from OIMB. Place a stuffed local seabird at each table, and allow the students to move around the room to CAREFULLY examine them all. Challenge them to look specifically for body parts which may be

OIMB GK12 CURRICULUM

adaptations to their coastal habitat (webbed feet, rock-colored plumage, strong beaks for catching fish, etc.).

9. Inform the students that they will make their own guides to local birds. Organize students in groups of 6-8 (depending on number of local seabirds to be researched and time available to draw birds). They may use the stuffed birds as a resource, as well as books (such as Sibley's field guides and Golden Field Guides' Birds of North America) and the internet. Suggested birds seen along the Oregon coast at different times of the year include: Tufted Puffin, Black Oystercatcher, Pigeon Guillemot, Pelagic Cormorant, Brandt's cormorant, Double-crested Cormorant, Leach's Storm Petrel, Caspian Tern, Western Gull, Common Murre, Pacific Brown Pelican, Aleutian goose.
10. Give each student blank field guide pages (one for each bird). Each student is responsible for drawing 6-8 birds, as well as finding information on one of the birds. Have them share this information within their group so that each student ends up with information (and a guidebook) for all the birds.
11. Have the students combine (staple, yarn, etc) the drawings together to make their own field guide, which should include each bird's name, geographic range, weight and wingspan, appearance, how they forage (e.g. on foot, wing, or diving), and nesting habitat (e.g. cliff face, sandy borrow).
12. **Extension:** Take the class on a bird-watching field trip to Coquille Point, Bandon or other local nesting grounds. They can use their personal field guides to identify the birds that are found there. If you need people to help on your field trip, contact the great folks at the Bandon-based nonprofit Shoreline Education for Awareness. They've helped with GK12 field trips and provide knowledgeable volunteers and field trip planning tips (<http://www.sea-edu.org>, email: info@SEA-edu.org)

Assessment: Field guides

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Seabird Field Guide

By: _____

Common Name: _____

Species Name: _____

Order: _____

Family: _____

Nest Habitat: _____

Wing Span: _____

Weight: _____

Range: _____

Foraging Behavior: _____

Chick Rearing Behavior: _____