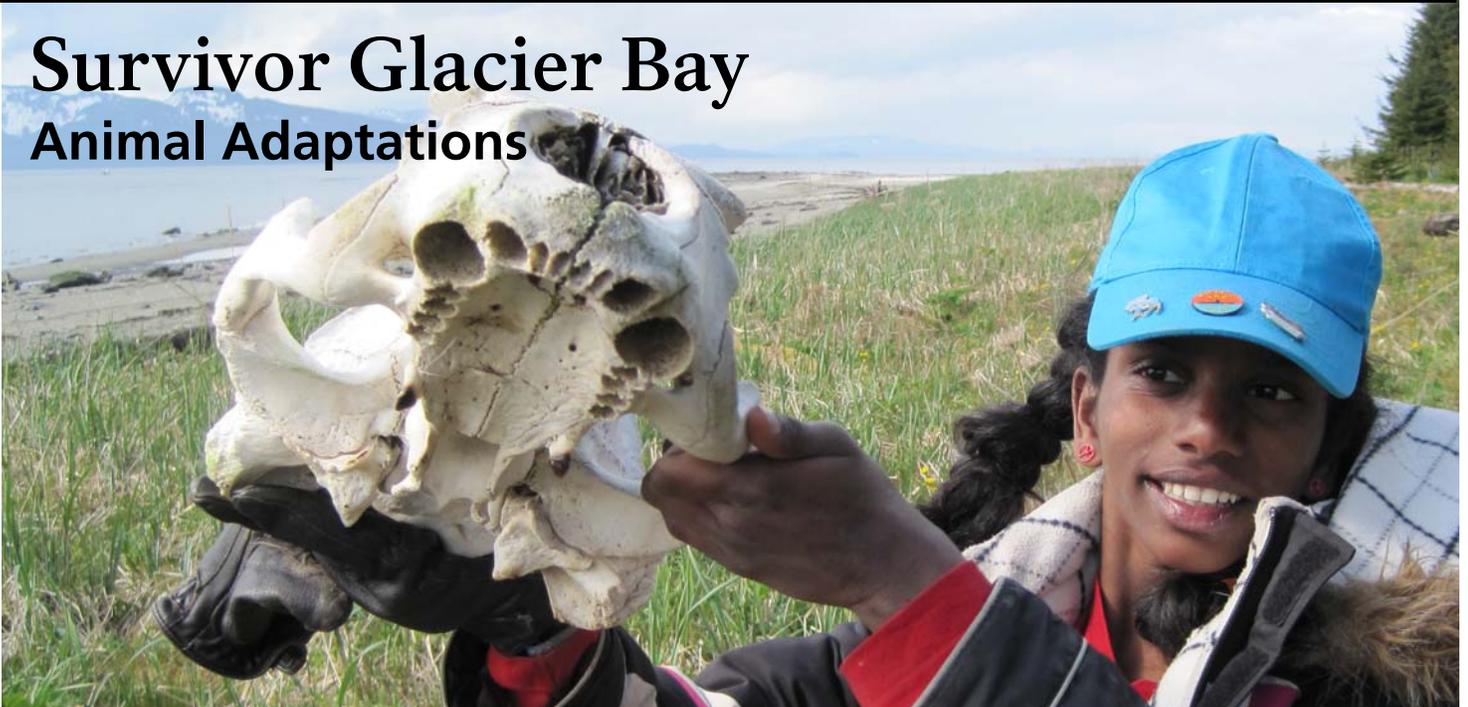




Survivor Glacier Bay Animal Adaptations



Activity: Survivor Glacier Bay

School Subjects: Life Science

Grade Level: 3-5 **Time requirement:** 45 minutes

National Science Standards Addressed

NS. K-4.3 Life Sciences: Characteristics of Organisms

NS. K-4.3 Life Sciences: Life Cycles of Organisms

NS. K-4.3 Life Sciences: Organisms and their Environments

NS. K-4.6 Personal and Social Perspectives: Types of Resources

NS. K-4.6 Personal and Social Perspectives: Changes in Environment

Lesson Overview

Glacier Bay is a vast wilderness that is home to many animals, including birds, mammals, fish and, historically, people. Each animal has special adaptations to survive in the cold waters and snowy mountains of Glacier Bay.

Lesson Objectives

By the end of the lesson, students will be able to:

Describe the basic differences between mammals, birds, and fish.

Describe why the Tlingit left Glacier Bay.

Share at least 3 things scientists can learn from skulls including teeth.

Materials

Prior to the program, Glacier Bay National Park will send you:

Pocket guide to Glacier Bay Animals and Plants

Model of an orca tooth

Maps of Glacier Bay

Jr. Ranger badges



Background Information

Glacier Bay National Park is filled with towering mountains, calving glaciers, and pristine ocean waters giving home to many species of animals, plants, insects, and more. However, the Glacier Bay that we see and experience today has not been here forever. A thousand years ago, the beaches, waters and glaciers were in a different configuration. A large glacier covered much of the area and a grassy outwash plain stretched before it eventually ending in the ocean. Several clans of the Huna Tlingit made their home here, surviving on the abundance of this rainforest ecosystem including the annual salmon runs, seals and sea otters, spruce trees, berries and more. A few hundred years ago, the glacier which had rested quietly behind the Tlingit villages began to advance rapidly, eventually forcing the Tlingit from their homes in a matter of days. The glacier destroyed everything in its path and completely re-sculpted the land and ocean scape of Glacier Bay. The Tlingit fled across Icy Strait to Hoonah, where they live today.

In the past 250 years the glacier has retreated 60 miles, revealing beaches, oceans, meadows, mountains, and many smaller glaciers. Inspired by the work of ecologist William Skinner Cooper, President Calvin Coolidge created Glacier Bay National Monument in 1925. In 1980, Congress designated Glacier Bay a national park. This protected and preserved for all people the magnificent tidewater glaciers, cultural history, opportunity for research, vast wilderness and the story of life returning to areas recently covered by ice. As the habitats of Glacier Bay National Park change in the wake of the retreating glacier, so do the animals that inhabit them. Every animal that lives in Glacier Bay has special adaptations to survive and even thrive in this special place.

For more on specific animals, please visit our website:

<http://www.nps.gov/gba/naturescience/animals.htm>

Another good resource is the Alaska Wildlife Notebook Series, published by the Alaska Department of Fish and Game. It is available at this web address:

<http://www.adfg.alaska.gov/index.cfm?adfg=educators.notebookseries>



Procedure

Prior to the program:

Introduce Alaska and some of Glacier Bay's animals to the class. Share the maps. Let the students examine the orca tooth and pocket guide. Have students generate questions for the ranger, to be asked as time allows.

During the program:

Have the students seated at their desks or in a group, wherever they can see the videoconferencing screen. The ranger will share skulls, furs, eggs, and other props in an interactive program. Assist the ranger in calling on students and helping them participate. At the end of the program, hand out Jr. Ranger badges to the students.



Extension Activities

- Nests:
Murre eggs are pointed at one end so they don't roll off cliff ledges. Puffins dig burrows to protect their eggs. Have your class design other nests for different kinds of birds to protect their eggs.
- Research some animals that live in your state. Identify some of the special adaptations they have to survive in different habitats.
- Listen to short audio programs about different Alaska animals on *Sounds Wild* produced by the Alaska Department of Fish and Game. <http://www.adfg.alaska.gov/index.cfm?adfg=soundswild.main>
- Blubber glove:
Fill a sturdy plastic bag with vegetable shortening. Insert another plastic bag, making a kind of glove. Fill a basin with cold water. Have a student put a plain plastic bag over one hand and the shortening glove on the other hand. Place both hands in water. See how long the student can comfortably keep both hands in the water. Have the student describe what it feels like. Let other students try as time allows.

