



Title: Wildlife Field Guide

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Theme: A variety of animals rely on healthy habitats.

Objectives:

- Students will identify several species of animals in southcoastal Alaska or their local region.
- Students will recognize the major habitat needs of different animal species.
- Students will understand the biodiversity of southcoastal Alaska or their local region.
- Students will understand the interdependence of living things in an ecosystem.

Duration: 120 minutes (some can be outside of class)

Age Range: 6th-10th Grade

Materials:

- Paper
- Pens or Pencils
- Markers, colored pencils, crayons
- Glue or tape
- Scissors
- AK Department of Fish and Game Wildlife Notebook
- Field Guides
- Whiteboard or poster board
- Dry-erase markers or colored markers

Background:

Southcoastal Alaska is a haven for many species of wildlife: five species of salmon, bottomfish, shellfish and other invertebrates, marine mammals, terrestrial mammals, shorebirds, sea birds, migratory ducks, birds of prey, and terrestrial insects and other invertebrates. The crude oil that spilled from the *Exxon Valdez* in 1989 contaminated many coastal habitats, altering the life cycles, health, and feeding habits of a wide array of species. Despite the oil spill, many of these animals still utilize the rich habitats of southcoastal Alaska. The biodiversity of the region is incredible, and tied to the health of the ocean. This region is an excellent focal point for creating a wildlife field guide. However, if your school is located outside of southcoastal Alaska, you may prefer to focus on habitats and species local to your

area. You could also compare and contrast your habitats and species with those found in southcoastal Alaska, or to compare and contrast the area affected by the *Exxon Valdez* Oil Spill with the area affected by the *BP/Deepwater Horizon* Oil Spill.

Preparation:

Print a number of copies of the AK Department of Fish and Game Wildlife Notebook series (<http://www.adfg.alaska.gov/index.cfm?adfg=educators.notebookseries>). If you prefer not to print copies, prepare computers for students to access the series. Compile relevant field guides and bookmark a few pages of interest.

Introduction:

Use a bubble diagram or other method to have the class brainstorm animal species and habitats students are familiar with. Encourage students to elaborate on their experiences exploring these habitats and seeing animals. Ask them what they feel like when they see these animals.

Activities & Procedures:

Use a Venn diagram to compare and contrast animals found in terrestrial, intertidal, and marine habitats or to compare and contrast animal species that exist in southcoastal Alaska and your region or the Gulf of Mexico. Discuss how habitat, abiotic factors (non-living things), and available resources determine what animals can live in an area.

Provide copies of the AK Department of Fish and Game Wildlife Notebook series to each student, or access it as a class online at: <http://www.adfg.alaska.gov/index.cfm?adfg=educators.notebookseries>. Hand out Field Guides as well. Pick a few species of animals and look them up as a class, calling on students to share facts about the animal like what they eat, where they live, etc.

Ask students to identify the important components of a field guide. Write these characteristics on the board. Have students then make their own Wildlife Field Guide. Assign a unique species from the region to each student, or allow students to choose their own species. Direct students to draw their animal, making certain the major characteristics are labeled and apparent. Next to each drawing, students should list the major characteristics, habitats, range, food source/prey, and predators for the species. The top of each field guide page should include the animal's common and scientific names. To extend the lesson, you may wish to have students research and include information on human uses of the animals and/or threats to the animals' health, including such things as habitat loss and pollution.

Have each student present their field guide page to the class. Compile the pages into a "Wildlife Field Guide," and make a copy available in the school or community

library, or post the pages online.

Wrap-Up:

Discuss with students how their view of the region may have changed through this activity. Were there more animals than they thought? Explain that this field guide represents only a few of the living things in area. Can they think of living things that are missing? How long would it take to put together a comprehensive field guide? Ask students how many of these organisms might be affected by something like an oil spill or pollution. As a final or evaluative activity, have students write a preface for the field guide that best describes the wildlife in the region and, if you wish, how they are connected to people and some of the challenges the wildlife face.

Evaluation:

The field guide preface serves as a formative assessment. Evaluate student comprehension based on their completed field guide pages and contributions during the discussions. Field guide pages should include the following: common and scientific names, drawing of the animal, major characteristics are labeled and apparent, and information on habitats, range, food source/prey, and predators for the species.

Wildlife Field Guide Standards

Concepts of Life Science: Students develop an understanding of the concepts, models, theories, facts, evidence, systems, and processes of life science.

SC1

Students develop an understanding of how science explains changes in life forms over time, including genetics, heredity, the process of natural selection, and biological evolution.

The student demonstrates an understanding of how science explains changes in life forms over time, including genetics, heredity, the process of natural selection, and biological evolution by:

[4] SC1.1 showing the relationship between physical characteristics of Alaskan organisms and the environment in which they live

[6] SC1.2 recognizing that species survive by adapting to changes in their environment

SC2

Students develop an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms.

The student demonstrates an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms by:

[3] SC2.1 sorting animals and plants into groups based on appearance and behaviors

[5] SC2.1 identifying and sorting animals into groups using basic external and internal features

[6] SC2.1 using a dichotomous key to classify animals and plants into groups using external or internal features

[3] SC2.2 observing and comparing external features of plants and of animals that may help them grow, survive, and reproduce

[4] SC2.2 describing the basic characteristics and requirements of living things

[6] SC2.2 identifying basic behaviors (e.g., migration, communication, hibernation) used by organisms to meet the requirements of life