

# Activity 8: Fishy's Who's Who - Aquatic WILD-



## Age:

Grades 4-12



## Time:

three 45 minute periods

## State Essential Learning Requirements:

Reading: 2.1, 2.2, 3.1

Writing: All of 1, 2.2, 2.3

Communication: All of 1, 2, 3

Science: 1.2

Geography: 1.1, 2.1, All of 3

Economics: 1.1

Arts: All of 1, 3.1, 4.1, 4.3

## Materials:

Aquatic WILD Activity provided: You need paper, pencils, map of state, etc

## Overview:

Students conduct an inventory of fish habitats that exist in their area, obtain information about the various fish species that occur in these habitats, and locate the fish species on a map according to where they occur.

## Washington adaptation provided:

Use the endangered species display map to determine what salmonids are in danger where students live. Use the CD ROM and WDFW pamphlets to inventory what fish are in your area.

## Objectives:

- To inventory fish and habitats in a local watershed.
- To report the status of fish and habitats in a local watershed.

## Critical Questions Addressed:

1. Value of Salmon
2. Salmon are endangered

## Resources:

- Sport Fish CD ROM (WDFW Resource Packet)
- Trout and Salmon Facts Pamphlet (WDFW Resource Packet)
- Washington's Fish and Shellfish Pamphlet (WDFW Resource Packet)
- Endangered Species Display map (Trunk)
- Anadromous Fish PHS map of region (Response folder)
- Warm Water Fish of Washington (WDFW Resource Packet)

## Directions:

Create an Annual Fish Management Profile which includes a map and report described below.

### Complete a map with a legend showing:

- Fish habitats in your watershed
- Fish species and their location in your watershed

### Provide a short report:

- Briefly describe the fish species and habitats on your map.
- State whether this is a first report or ongoing report updating previous years profile.
- What differs from the previous year's report of habitats and species.
- What challenges do fish species and their habitats face based on what you know about the natural conditions and potential human impacts in your area
- What predictions do you have for these fish habitats and species.

Archive each year's findings in the classroom or school library, and compare findings from year to year on your watershed health and salmon.

# FISHY WHO'S WHO

## OBJECTIVES

Students will: 1) recognize and identify the major species of freshwater or saltwater fish that live in their area; 2) describe various values of fish species in some aquatic ecosystems; and 3) locate places where the fish species occur.

## METHOD

Students do an inventory of fish habitats that exist in their area, obtain information about the various fish species that occur in these habitats, and locate the fish species on a map according to where they occur.

## BACKGROUND

There are fish in virtually every area of North America. They play a variety of roles in aquatic ecosystems. Some are predators on other aquatic life. Some are feeders on plant material. Still others scavenge or feed on detritus. Some species deposit eggs in special nests, some have live young. They exhibit a wide range of behaviors. While some fish are well known by those who fish, others are less conspicuous to humans but are nevertheless important performers in freshwater and saltwater ecosystems. The major purpose of this activity is to expand students' knowledge of the different species of fish that occur in their area.

**Age:** Grades 4-12

**Subjects:** Science, Language Arts

**Skills:** analysis, application, classification, communication, comparing similarities and differences, description, discussion, drawing, identification, listing, mapping, media construction, reading, reporting, research, small group work, using time and space, writing

**Duration:** three 45-minute periods

**Group Size:** small groups

**Setting:** indoors

**Conceptual Framework Reference:** III.A., III.A.1., III.A.2., III.A.3., I.A.1., I.B., I.C.3., II.A., II.B., II.C., II.D., II.E., II.F., IV.B., IV.C

**Key Vocabulary:** biography, habitat, fish

**Appendices:** Local Resources, List of Agencies and Organizations, Aquaria, Animals in the Classroom

## MATERIALS

paper; pencils; large piece of paper for wall map; map of state; overhead projector; painting or drawing materials for illustrations; colored string or yarn; tape, thumb tacks, or pushpins

## PROCEDURE

1. Ask the students what fish they think live in their area. Focus on identifiable boundaries such as their community, state or region. What different kinds of fish have they seen, caught, heard of or read about? Make a list of these different kinds of fish and post it in the classroom.
2. Obtain, or have the students make, a large map of the area they have chosen to study showing land as well as major bodies of water: lakes, rivers, large streams, bays, and/or oceans. Make sure each major kind of aquatic habitat—freshwater and/or saltwater—is identified. Locate the actual sites of these habitats in the area to be studied. (A simple way of making a large wall map for use in this activity is to trace the state map, from an atlas, on an overhead projector transparency. Project the map onto a large piece of paper on the wall and outline it.)
3. Divide the class into teams. Have each team identify possible sources of information about fish and fish habitats in the community, state, or region. Have the teams develop a plan for getting the information. Don't neglect first-hand sources, such as family members and friends. State wildlife agency personnel, water quality specialists and marine and aquatic biologists may be available to help. Phone calls or visits to state and federal agencies are invaluable in obtaining materials. Local wildlife clubs, state wildlife agencies and private groups and organizations often have their own publications that would be helpful. Other sources might include the school or public library. Each team should then use their sources and develop "biographies" for as many of the fish that occur in their area as possible.

Each "biography" should include the fish's name (common and scientific), where it lives and what its habits are. It should also include specific information about

the kind of habitat (freshwater, estuarine, or marine) the fish needs in order to survive. (You might have students look at some sample entries from a human biographical reference source like *Who's Who* to get an idea of how to write a short biographical sketch.) In addition to biological information about the fish and its habitat, the "biographies" should include, where possible, information about ecological, scientific, recreational, economic, political, cultural, aesthetic and intrinsic reasons for which fish are valuable.

4. Ask each team to create a set of paintings, sketches, or other illustrations of the fish they have written about in their biographies as well as an illustration of the habitat in which the fish is found. These should be drawn large enough to be seen easily in a wall display.

5. Have the teams meet and compare the information they got from different sources about the various fish and habitats. In some cases, the information may not agree. If so, the students might try to determine why. Through this process of comparing research notes, the students should be able to improve the accuracy and completeness of their descriptions of the various fish and habitats.

6. Returning to the large wall map, ask the teams to post the biographies, on cards or in a suitable format, along with their artwork depictions of the fish and their habitats, around the map near locations where the fish occur. Extend colored string or yarn from the cards and sketches to various points where the fish occur. Use tape, thumb tacks or push pins to attach the yarn to the artwork and map.

7. Next have the students compare their original list of fish with their map entries and note how they have added to their knowledge of fish in the state.

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### **EXTENSIONS**

1. Make replicas of some of the fish in three dimensions. Hang them on string from the classroom ceiling as mobiles. Let the classroom become an aquatic habitat!

2. Explore why some fish species or types occur widely, in various habitats, while others are more restricted or specialized. What special needs do some fish have or what special abilities do they have?

3. Find out how some fish got their names! Why is a steelhead a steelhead, or a darter a darter? The scientific names are also interesting to explore.

4. Invite a local fish biologist to come and speak to the class about fish and fish habitat in the state, but only after you have created your displays so that the biologist can provide advice and make suggestions.

5. There may be hatcheries, fish research stations, or other places doing work with fish and fish habitat near your school. If possible, arrange a tour of one of these facilities for the class.

6. Are there any special fish habitat "hot spots" in your state—places where fish are in danger because of human or natural actions? Note these on your wall map as well and describe the nature of the problem.

7. Some local fish can survive as aquarium animals in the classroom. You may want to find out which these are in your state and see if it is possible to get and keep them for a time in the classroom. Only do this if you are certain you understand the life requirements of the fish, can keep it in good health in your classroom tank, the fish is not rare or uncommon, and it is legal to keep the fish in an aquarium according to federal and state laws.

8. Conduct a "creel survey." This involves conducting interviews of people whom you find fishing—for example, along streams, in lakes, at the ocean shore, and at city fishing holes.

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### **EVALUATION**

1. Name five species of fish that live in your state.

2. Describe where in the state each of these fish is most apt to be found and in what kinds of habitat.

3. List and describe a variety of reasons that fish are important.



## Fishy's Who's Who - Aquatic WILD- Student Worksheet

### Resources:

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