

# Investigation Eleven - Utah Fish Cooperative Learning Activity

<b>Standard V</b> Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment.
<b>Objective 4</b> Observe and record the behavior of Utah animals.
<b>Intended Learning Outcomes</b> 1. Use science process and thinking skills 4. Communicate effectively using science language and reasoning

Standard  
V  
Objective  
4

## Background Information

Fish are an interesting animal that are fun to observe. They breathe by gulping water through their mouth and pumping it over their gills. The gills take in oxygen from the water and replace the oxygen with carbon dioxide. Fish also have moveable fins on the top, underside and tail to keep itself upright. The tail fin also helps the fish swim. The fins located just behind the gills help the fish turn and stop. Fish have no external ears. Sound is carried to their inner ears by delicate nerve endings along their backs that sense vibrations and movement in the water.

The history of fish populations in Utah has changed over time. Today popular kinds of fish are trout, carp and catfish. Back when the Indians and pioneers were hunting, farming and living in the Great Basin, the fish species were very different. Native fish back then were squawfish, chub, whitefish, sucker and cisco. Many fish that are popular today were brought from other places. The native fish are sometimes considered "trash fish."

Today in Utah, many of the native fish are disappearing. Because of disease, changing in habitat, and competition from the introduced fish, many of the native species are endangered. To preserve the biodiversity of Utah's fish populations, biologists are working hard to protect these endangered fish. Luckily, some of the fish species are doing quite well. One of them, the Bonneville cutthroat trout, recently become Utah's state fish.

## Pre-Assessment/Invitation to Learn

Play Hangman with students to spell the name of the Bonneville Cutthroat Trout.

\_\_\_\_\_

\_\_\_\_\_

Tell them it is the name of an animal that belongs to the group they will be studying. A clue might be that it is a vertebrate. Another would be that it was endangered. After students have solved the puzzle, discuss its claim to fame as Utah's state fish.

## Instructional Procedure

### Materials

- Jar
- Names of fish on small pieces of paper
- Art paper and crayons
- Posterboard or bulletinboard paper

1. Divide students into five or six cooperative learning groups. Be sure that groups will work together effectively to research information on Utah fish.
2. Have students draw the name of a fish from a jar. Include only those you will have information on. There is a list that can be cut apart for this purpose on the Division of Wildlife Resources website in the Resources section.
3. Give each group the product guide/rubric and a large-sized paper that will be used to create a poster or large graphic about their fish (See attached information).
4. Allow groups time to read, organize and plan a creative and informative product they can share with the class. They should design a rough draft of their plan on a sheet of paper.
5. Have each group share their information, with each student participating to explain his/her portion of the poster.
6. Place the posters in the library or classroom.

## Curriculum Extensions

### *Language Arts-*

- In the Project WILD publication, there is some excellent information about the use of native fish by Indians and pioneers in early Utah. (Integrate this information into social studies content core and discuss "native/trash fish" and our perception of these today. ) (Standard VII, Objective 3)

### *Science-*

- Schedule an activity with the Division of Wildlife Resources Aquatic Resource Specialist to take the students fishing. Volunteers will meet classes at a fishing location and provide all equipment for a great outing. (ILO 2)

### *Math-*

- Chart the location of fish by different environments. (Standard V, Objective 1)

## Assessment Suggestion

- There is a rubric attached for the group project. Each box represents group members and grades their portion.

## Resources

### *Websites:*

- <http://www.wildlife.utah.gov> - a site that has the Utah Conservation Database website. Select "Vertebrates" and see options for fish. There is a list of all the species. When you pick a species, you can read information about the species, see a picture (in most cases) and then click on the option to see a range map.
- <http://dwrcdc.nr.utah.gov/ucdc/> Click on Fourth Grade plants and animals for great pictures and short summaries of fish.

### *Agencies:*

- Ann Evans, Aquatic Resources Specialist at Division of Wildlife Resources is creating a resource trunk for checkout.

## Home and Family Connections

- Visit a local pet store and observe a variety of fish. Do any of them have ties to Utah?
- Buy a goldfish and observe fish behavior.
- Encourage families to try fishing
- Visit a nearby fish hatchery.

# Utah Fish Project

This project will help you learn about a specific fish found in Utah. Use a large poster sized piece of paper. Guidelines for the project are as follows:

1. Divide your poster into four equal sections.
2. Draw a circle or oval in the middle of your poster.
3. Assign each person in your group to be in charge of a section of the poster.

Circle: Write the name of your fish in the middle circle in a creative way.

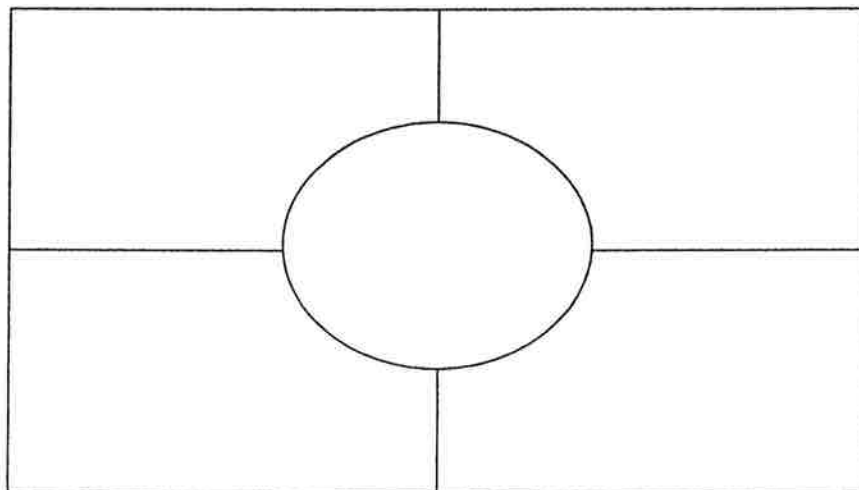
Box 1: Draw a picture of your fish. Use correct information and coloration.

Box 2: Draw a map of Utah showing the geographical location where your fish is found.

Box 3: Write ten interesting facts about your Utah fish. Be unique and creative.

Box 4: Draw the life cycle of your fish.

4. Have fun with this project. Please remember to be careful, colorful and detailed! Take your time and do your best. Use a ruler to help keep your writing even and neat. Spacc lcttrs correctly. Be careful with your illustrations.
5. Remember, you may have suggestions from parents or others, but this needs to be the work of your school group.



# Utah Fish Cooperative Learning Poster Rubric

Group Names: \_\_\_\_\_

**Scoring:**

- (4) You've Got It!
- (3) Almost There!
- (2) Getting Close!
- (1) Take Another Look!

**Following Instructions:**

- 4 We accurately described in detail all of the things our teacher asked us to describe.
- 3 We accurately described most of the things my teacher asked us to describe.
- 2 We described a few of the things my teacher asked me to describe.
- 1 We didn't describe anything.

**Readability:**

- 4 We used neat handwriting.
- 3 We used neat handwriting most of the time.
- 2 Our handwriting could have been neater.
- 1 Our handwriting was difficult to read.

**Drawing Effort:**

- 4 We drew our pictures neatly and carefully.
- 3 We drew most of our pictures neatly and carefully.
- 2 We drew carelessly.
- 1 We didn't draw pictures

<p>Circle</p> <p>1. Instructions _____</p> <p>2. Readability _____</p> <p>3. Drawing Effort _____</p>	<p>Box 1</p> <p>1. Instructions _____</p> <p>2. Readability _____</p> <p>3. Drawing Effort _____</p>	<p>Box 2</p> <p>1. Instructions _____</p> <p>2. Readability _____</p> <p>3. Drawing Effort _____</p>
<p>Box 3</p> <p>1. Instructions _____</p> <p>2. Readability _____</p> <p>3. Drawing Effort _____</p>	<p>Box 4</p> <p>1. Instructions _____</p> <p>2. Readability _____</p> <p>3. Drawing Effort _____</p>	

Total Score \_\_\_\_\_