

# ***Fish Iowa! Unit***

## **Unit Objectives**

1. Students will become familiar with Iowa's aquatic resources, including habitat types found in those waters and their importance.
2. Students will identify and label the parts of a fish and explain their function and be able to identify species.
3. Students will become familiar with basic fishing regulations and ethics and individual angler responsibilities.
4. Students will become acquainted with the general characteristics of the fish families found in Iowa.
5. Students will be able to identify fish species common to their region of the state.
6. Students will learn the procedure for tying basic fishing knots.
7. Students will relate the concept of an aquatic ecosystem to the ways in which baits and lures are used to pursue different fish species.
8. Students will become familiar with a variety of live and prepared baits, how to effectively present them and the types of fish for which they are used.
9. Students will learn the correct procedure for "catch and release" of fish.

## **Background**

This unit is intended to be used with 11th and 12th grade environmental science students who have a varied fishing background.

## **Day One**

Break students into four groups and give each of them one of the following four aquatic habitats. They will learn about the habitat and briefly explain their habitat to the rest of the class.

1. Aquatic Habitats
  - a. Students study a diagram of a lake, learning about the littoral zone, open water zone and benthic zone.
  - b. Students see a cross-section of a pond and identify which type of "lake" zones exist in most ponds.
  - c. Students will learn about streams and rivers and the parts that make them up such as runs, pools and riffles. Watershed will be discussed as well as channelization.
  - d. Brief discussion of mine lakes, cold-water streams, backwaters and where some of these exist locally.
2. Students will then take a quiz over the aquatic habitat types.

## **Day Two**

1. Give each student a copy of the current years fishing regulations. Go around the room and have each student state ONE regulation (they may already know many of them).
2. Discuss any major regulations that were not brought up by a student.
3. Have students break into small groups and brainstorm about ethics in fishing. They should make a poster with at least three rules on it. These will be displayed in the hallways.

## **Day Three**

1. Give each student a bowl with a goldfish or guppy in it.
2. Have the students observe the fish, list characteristics and discuss the functions of the features of a fish.
3. Use a fish worksheet to label all the parts of a fish.
4. Have students use the internet to find out more information about all the parts of a fish, they should write one paragraph about each part of the fish on the worksheet.

## Day Four

1. Pre-test the students with a quiz on fish species identification. Have pictures of specific fish displayed through the projector and a word bank on the board.
2. Write Catfish family, Sunfish family, Perch family, Trout family, Pike family and Minnow family on the board. Also write, channel, bullhead, flathead, largemouth, smallmouth, sunfish, crappie, yellow, walleye, sauger, brook, rainbow, brown, northern, musky, and carp on the board (but not in that order). Discuss each fish family and have the students tell me which fish goes with each family. Have a show of hands to see who has caught some of these specific fish and take time for storytelling if any students have an exciting story.
3. Have the students play the *Fish Iowa!* fish identification card game.
4. Give a post-quiz on fish identification.

## Day Five

1. Separate the class into those who know how to tie knots and those who do not. Pair students up or put them in small groups and have the students who know how to tie knots teach those who do not know. Each student should demonstrate to the teacher sometime during the class that they can tie a knot.
2. While students are working in small groups, discuss fishing with students and find out if any students do not know how to cast. If there are any that do not know how to cast, take them outside and have them practice. (I think this will be the rare student since our elementary does fishing, however, there may be a few).
3. Have students brainstorm all the types of bait that may be used. Discuss how to store/carry the bait and what it would be used to fish for.

## Day Six

Students should already be familiar with food webs. Give them a list and have them make a food web poster where they draw a picture of all the critters and link them together. Suggestions are: sun, algae, zooplankton, bacteria, water strider, largemouth bass, mosquito larvae, damselfly naiad, bluegill, tadpole, predaceous diving beetle, giant water bug, crayfish, caddisfly larvae, water flea, cyclops, rotifer, and any other organism students wish to add into their food web.

## Day Seven

Discuss safety when we go fishing as well as proper "catch and release" techniques. Most of my students have been to the location we will fish at before. My group is typically about 15-20 and many are experienced fishermen/women. When done discussing safety and how to transport the poles on the bus, have students play the fish identification game again until the end of class.

## Day Eight

Go fishing :) We will catch and release only. I will hang around by the less experienced students. All students will be within sight. (it's a small pond).