

# Pathway to Fishing

## Station 1.

### Poster 1.

**Fish Anatomy:** Allow the students to name different parts of the fish. As they do, give them details about the part.

**The Lateral Line.** The lateral line is a sense organ that fish use to detect low frequency vibrations in the water. What animals put out vibrations in the water? Does your lure put out vibrations?

**The Eye.** Do fish see color? Yes, fish see all of the same colors that we do. Fish can see 3 time further than we do. If you put on your goggles and went under water and could see one foot how far could a fish see? If you could see 10 feet how far could a fish see?

**The Nares.** The nares is a primitive nose that smells food in the water. When you take you dog out for a walk what does he spend most of his time doing? Does a dog have a better sense of smell than you do? How many times? Up to 1000. A fish has a sense of smell 10 times better than a dog, so how many time is that better that your sense of smell? **The Food Web** In the center of the web is a magnified group of plants and animals. Does anyone know what these are called? Do any of you watch Sponge Bob Square Pants? Who is the guy who has one eye and is evil? Captain Plankton. Plankton is the animal that fish eat when they are small and is the most important food for all fish. Next to the plankton you see small fish called minnows. They eat the plankton. Perch eat the minnow and plankton. Walleye eat the perch and minnows and plankton when they are small. And muskies eat anything they want. They are the wolf of the water. Also identify the fish eating birds in the top of the picture. Bald eagle, sea gull, a duck called a merganser, king fisher and blue heron.

**The Mouth.** A fish uses his mouth to capture prey and to take in water that passes over the gills. The gill take oxygen out of the water and that is the way fish breath. Fish also have a great sense of taste. If you had a train car full of water with fish in it and you put in one cup of salt, the fish could taste the salt.

**Scales:** Scales are use to protect the fish from parasites, fungus and bacteria

**Slime:** You will notice that some fish such as trout have a lot of slime. What protection does slime give the fish? From bacteria and fungus, which can kill the fish. It is important to get your hands wet when handling fish.

**The Caudal Fin.** This is the motor that makes the fish go through the water. How fast can fish swim? Fish with square tails may swim up to 5 miles per hour. A general rule is the deeper the V in the tail the faster a fish can swim. How fast can a tuna swim? Up to 50 mph for a short burst.

### Poster 2.

**Aquatic Ecology:** This poster has two main features, a food chain represented on the left and a food web represented on the right.

**The Food Chain.** Note the magnified circle near the bottom of the poster. There are aquatic insects inside the circle. You can also see them on the aquatic plants. Above the plants are bluegill. Bluegill eat insects. Which fish eats the bluegill? Largemouth Bass. What do we call it when one animal eats another animal that eats another animal? A food chain.

If there were an accident and gas spilled onto the water what would be the first animal to die? Plankton. What would happen to the rest of the food web? Many of the fish would die and fall to the bottom where they would be eaten by crawdads, catfish and bacteria. After a few years the food web would probably return to normal. What would happen if a fisherman killed every large muskies that he caught? The perch would over populate and eat all of the minnows. Then the perch would die because of starvation. They would fall to the bottom where they would be eaten by catfish, crawdads and bacteria. It is important to release the largest predators to maintain the food web.

## **Station 2.**

**Lure Presentation:** Demonstrate the 2 basic lure presentations. Vertical and Horizontal.

**Vertical Presentation.** What do we call anything that goes straight up and down? Vertical. If you went ice fishing how would we present our lures to the fish? Drill a hole in the ice and fish vertically. Show the students small tube jigs, ice jigs etc. A general rule is if the water is cold you will be more successful if you use a vertical presentation. You can get in the boat and use the fish finder to locate fish and then present a lure vertically to the fish. If you are fishing from shore, put the lure under a slip bobber.

**Horizontal Presentation.** When the water is warm you will be more successful if you present your lure to the fish horizontally. You can cast and retrieve from shore or get in a boat and troll. Demonstrate the 3 horizontal presentations.

**Steady Retrieve:** Cast the lure parallel to the shore, retrieve it and ask the students what they see. The lure floats, it wobbles, it has flash and it looks like a minnow. Cast the lure again and tell them the name of the presentation. **Steady Retrieve.** Ask the students to say Steady Retrieve.

**Stop & Go.** Cast the lure parallel to the shore and retrieve using the stop & go. Why would a fish hit the lure when it stops? This is a natural movement fish use when they are sick or injured. Repeat the presentation and ask the students to say **Stop & Go.**

**Twitching.** Cast the lure parallel to the shore and twitch the rod tip while using a steady retrieve. What does the lure look like when it is jumping around? An injured minnow. Repeat the retrieve and ask the students to watch the end of the rod. Repeat and ask them to say **Twitching.**

## **Station 3**

**Knot Tying:** Demonstrate how to tie an improved clinch knot using the large black hook. Give each student their own piece of fly line and help them tie the knot using the holes in the table. Have them untie the knot and tie the knot again. This station needs lots of helpers, so use the parents to help.

## **Station 4**

### **Poster 1**

**How to Handle Fish:** This poster shows different kinds of fish and how to handle them safely.

**Largemouth Bass.** Place your thumb in the fish's mouth and grasp the outer lip with your index finger. The bass will become calm and you can remove the hook.

**Sunfish:** All sunfish have spines on their fins. These can puncture your skin and occasionally break off under your skin. To avoid being poked, grasp the fish firmly between your thumb and forefinger and roll the spines down against the fish with your palm.

**Walleye.** Walleye have lots of spines and a razor sharp edge on their gill cover. Place your thumb and forefinger on each gill cover and roll the spines against the fish with your palm. Use the same technique for perch.

**Catfish.** There are three spines on catfish. One on each pectoral fin and one on the dorsal fin. Place the thumb and forefinger on either side of the fish behind the pectoral spines. Catfish have a skin, so keep your hands wet when releasing these fish. The whiskers are an extra set of taste buds that help them find food. They have another set at the base of their tail.

**Trout.** Trout have a lot of slime covering their body, so keep your hands wet or keep the fish in the water. Lay the fish's belly in the palm of your hand and gently grasp the fish. Remove the hook using a set up needle nose pliers or forceps.

### **Poster 2**

**Fish Identification:** Have the students identify different fish that they have caught. Point out the different groups. Salmon, catfish, perch, and sunfish. Talk about why fish have different shapes and coloration.

## Station 5

**The Ethical Angler:** What are ethics? Rules to live by. Do you have any rule to live by at home? Here are some of the rules fishermen live by.

Support Conservation Efforts. What is conservation? It is to use part of the resource and save part of the resource. In our case the resource are fish. We have laws to protect fish by limiting the number of fish we can harvest.

Practice Catch & Release or Selective Harvest. In some cases, such as this lake we want to release the large predators, which are largemouth bass. The largemouth eat bluegill and keep the food web in balance. In other cases, such as Mesa Lakes there are too many brook trout. To help bring the food web back in balance we would use Selective Harvest to reduce the number of fish in the lake.

Don't Pollute. What would happen if we spilled gas onto the water? Some of the plankton will die and the food web will go out of balance. If you get a tangle of line (birds nest) in your reel what should you do with it? Throw it in the trash. What animals would be harmed if we just throw it on the ground?

Ducks & geese get it around their legs and they fall off. Always pick-up any line you see on the ground.

Practice Safe Angling & Boating. What is the most dangerous aspect of fishing? Hooking someone with your lure when you are casting or hooking yourself when handling a fish. What is the first thing you should do when you get in a boat? Put on your life vest.

Obey all Rules & Regulations. The Division of Wildlife has regulations to protect wildlife. You can get a copy of the laws at any Division of Wildlife office or at any sporting goods store. If you break the laws a game warden will right you a ticket and you will have to pay a fine or go to jail if you are doing something really bad.

Respect Other Anglers Rights. If you were catching a lot of fish and another fisherman started fishing right next to you how would that make you feel? When your fishing it is OK to talk to other fishermen, but don't fish in the same area. Many people go fishing so they can have peace and quite and enjoy nature.

Respect Private Property Rights. How do you get permission to fish on private property? Go to the property owners house and ask if you can fish. If you get permission make sure you close any gate that is closed and leave open any gate that is open. Many property owners have cows or horses. They will be very unhappy if their livestock gets out and cause damage. If you harvest some fish, stop at the owners house and thank him for the opportunity to fish and ask him if he would like to have some of the fish. If you share your harvest the land owner will be very happy to let you fish the next time you stop by.

Share Your Fishing Knowledge and Skills With Others. When you are fishing with your friends and you are catching lots of fish and they're not, give them the information that will help them catch fish. This may be as simple as telling what kind of lure your using or the presentation or how deep your fishing.

Promote Ethical Sportfishing. When your fishing with your friends and you see them doing something unethical, show them the proper way to do it. Their bad behavior reflects on your ethics.

## Station 6

**Where Fish Live (Location)** This poster is a contour map showing us what it looks like on the bottom of the lake. Many lakes are not mapped, but if a map is available it will help us know where to fish. What do the numbers represent? The depth. Where is the deepest spot? 42'. Where is the shallowest place? 3' deep on the hump on the north side of the lake. At the bottom of the map is the scale indicating distance. If we follow the 40' contour we see a small area. When we follow the 30' contour we see a much larger area. Find an area where the lines are close together. What would this look like? Steep. How would you describe an area where the lines are far apart? Flat. What grows in shallow water flats (10' deep or less) that is important to fish? Plants. What lives on and around the plants that is of interest to fish? Have the student list all of the animals they know that use this area including those on the surface that fish would eat. (Use the flip chart to show them some of the animals) So the location to fish in the summer when the plants grow is shallow water flats. In the fall when the water cools down and you're sitting in school and you'd rather be out fishing is where there are rocks. What lives under rocks that fish like to eat? Crawdads. The area of the lake that have rocks are points, islands and humps (under water islands) *Point to these features on the map.* So, the location to fish in the fall in where you see rocks. What happens to the lake in the winter? It freezes. So we could go ice fishing. Have any of you been ice fishing? In the

winter most of the food that fish like to eat is not available, so they eat small microscopic animals. Do you know the name of these animals? Do you watch Sponge Bob Square Pants? Who is the guy who has one eye? Captain Plankton. *Use the flip chart to show them plankton.* There are millions of plankton in the water and fish swim through the plankton with their mouth open and suck in plankton. Plankton does a funny thing during the day. As the light gets brighter plankton goes deeper. It can go as much as 30' deep. To be successful we need to find a location that is 30 feet deep. I like to fish in a spot where I have shallow water next to deep water. *Point out one of the humps.* As the plankton goes deeper, the fish go deeper and we would fish deeper. As it warms during the spring what happens to the ice? It melts. If I were a rainbow trout living in the lake where would I go and why would I go there when the ice melts? Where do salmon go when they leave the ocean? Up stream. Are trout in the salmon family? Yes. So, where do rainbows go? Up stream. They lay the eggs so there will be a new generation of fish. What do we call it when fish lay eggs? Spawning. The best location to fish is in the lake where the water enters from the stream. After spawning fish return to the lake they rest for two weeks before they start to look for food. They return to the weeds that are just starting to grow. Review the different locations to fish during eat time period.

### **Station 7**

Castings: Set up a number of rods about 20 feet apart and the targets (buckets) about 30 feet away. Demonstrate how to cast the lures in both an overhand and under hand motions. Show the students how to hold the reels for proper balance and line retrieval. Have the students cast for about 10 minutes.

Each station should last 10 to 12 min. Students then rotate to the next station. Students should be divided with 8 years old and less in one group and older students in another. You will need to make the information more simple for younger students. These notes are just the way I teach the class. You can use it as a guide and take any information you find relevant when you teach the station.