

The Fish is Right!

This activity is part of the **Water Attitudes** theme

Purpose of this activity:

Introduces students to some of Ontario's native fish and the habitats they are found in. With the use of riddles, picture clues and a relay race, students will have fun familiarizing themselves with the different species of fish in Ontario. Students will learn that different species of fish rely on different habitats for survival within a lake.

Key Messages:

- Ontario has an abundance of different kinds of fish; there are approximately 175 species in Ontario.
- Ontario's lakes provide a diversity of habitats for our native fish and Ontario's fish have adaptations specific to their preferred habitats.
- If fish can not find their specific habitat, these adaptations may not be beneficial to the fish and may put the fish to a disadvantage.

Materials:

- 2 volunteers needed for this station
- Laminated Fish of Ontario Poster
- Stopwatch
- White board
- White board markers
- Laminated set of 15 Picto-Puzzle cards (and spare set)
- Laminated set of 7 Riddle cards (and spare set)
- Laminated set of 7 fish cut-outs with Velcro tabs on back and fish names written on back (and spare set)
- Laminated mural of lake profile with Velcro tabs in different fish habitats
- 8 pylons
- 18 wooden poles (thick doweling) sharpened at one end
- 1 large wooden pike model with handles
- 1 large wooden pumpkinseed model with handles

What will I be doing?

You will either be the Game Show Host or the Game Show Assistant. "Name That Fish" and "Riddled Fish" are run as game shows. The Game Show host will run the activities and the Game Show Assistant will keep track of the teams' points on a whiteboard. At the completion of the first two activities, you will then run The Great Swim Off - a fun relay race.

Set Up Instructions:

To set up Name that Fish:

Write all the names of the fish on the white board so students can see the names and try to relate them to the picture of the fish. (most students won't know f the fish off the top of their head)

To set up the relay race:

Two races side by side will need to be arranged. 9 pieces of wooden poles (or ski poles) per obstacle course. Arrange so that students have enough room to maneuver through the poles with the wooden cutout.

- 1- You will first divide the students into two teams (**it is possible to run this station with two different groups of students instead of dividing one group into two teams**). Assign each team their name, **Smelts** and **Bullheads**, and draw two columns on the whiteboard with their names at the top.
- 2- Explain to the students that as teams, they will gain points by answering various questions in Name that Fish and Riddle Fish. The points that each team accumulates will allow them first choice of fish in The Great Swim-Off!
- 3- To determine which team goes first, ask if anyone knows how many species of fish there are in Ontario (**approximately 175 species**). If there are no answers then prompt the students with: "It is more than 50 and less than 200". The team which guesses the closest number to the correct answer goes first in the opening activity. Tell the students the correct number of species of fish in Ontario, is 175.

Games

Name That Fish

- 1- Go through one picto-puzzle card with all the students, explaining how a picto-puzzle works (this

leaves 14 picto-puzzle cards, a possible 7 for each team).

- 2- Explain the rules of the activity:
 - During a “turn” each team will have 10 seconds to come up with the correct name of a fish. If the team gets the correct answer they get a point. If they can identify the fish on the Fish of Ontario poster they get an additional point (a total of two points).
 - If the team does not get the correct answer at either stage, the other team gets 5 seconds to come up with the correct answer and steal the points.
 - If neither team guesses the correct answer, tell them, and then show them the fish on the Fish of Ontario poster
- 3- The Game Show Host turns the cards to face the students. The Game Show Assistant times 10 seconds with the stopwatch.
- 4- Alternate between the two teams. Go through all cards or play for a maximum of 5 minutes

Riddled Fish

- 1- Read one riddle card and figure it out as a group then take the fish cut out from the back of the riddle card and see if the group can place it correctly on the lake profile mural ... this shows the students what they need to do (this leaves 6 riddle cards, a possible 3 each)
- 2- Explain the rules of the activity:
 - After the Host has read the riddle, teams get 20 seconds to figure out the riddle.
 - If the team gets the correct answer, then the Game Show Assistant gives them one point. They then take the fish cut-out and get another 10 seconds to place the fish in its proper habitat on the lake profile mural (**these correct answers can be found in Background Info**). If they get this correct, they get another point (a total of two points).
 - If the team does not get the correct answer at either stage, the other team gets 10 seconds to come up with the correct answer and steal the points.
 - If neither team guesses the correct answer ... work through it with them as a group.
- 3- The team that began in Name that Fish goes second in this activity.
- 4- The Game Show Host reads the riddle card to the first team. Once the riddle has been read, the Game Show Assistant starts timing with the stopwatch for 20 seconds. Once a group has answered the question, the Game Show Host gives the fish cut-out to the team to place on the lake profile.
- 5- Work through all Riddle cards or play for a maximum of 5 minutes.

The Great Swim Off

- 1- As a group move to the Great Swim Off obstacle course. Explain that this is a relay race in which the

students will be the fish! The goal is for the first part of your team to get to the pylons at the other side of the course, while holding onto your fish, trade the fish with the waiting members of your team and then they race back to the finish line. The poles represent the obstacles found in lakes. Each team must run around each of the poles without knocking them over, while holding onto your fish

- 2- Show the students the two fish that they will be “driving”, a Pike and a Pumpkinseed. Have the team that accumulated the most points through the game show activities, choose the fish they want to be for the relay race.
- 3- Ask them why they chose that one.
- 4- Have the teams approach the Starting Area.
- 5- Show the students how to properly carry their fish.
Pumpkinseed - **One hand on each of the handles, Hands must stay on both handles at all times**
Pike - **One hand on the one handle, Can only use one hand and you must carry your fish low**
- 6- Send half of each team to the line on the other side of the course.
- 7- “On your mark, get set, SWIM!”
- 8- At the completion of the race ask the students if this is what they expected at the beginning?
 - Discuss the advantages and implications of the two body shapes.

Questions to Ask Students:

Q: What is habitat?

A: Habitat is the area where plants or animals live. Within that area, there needs to be the right space, food, shelter and water for each organism to live.

Q: What is important in a fish's habitat?

A: Food, shelter, temperature preference of the fish.

Q: Where and how would the pike shape be an advantage?

A: for short bursts of straight-ahead speed to catch prey from their hiding places in the weeds.

Q: Where and how would the pumpkinseed shape be an advantage?

A: for maneuverability and twisting escapes among rocks and weeds

Q: What kind of obstacles would be found in the lake?

A: Plants, rocks, predators etc.

Q: The fins on a fish are important, anyone know why?

A: They help the fish swim, twisting and turning to help them get away from predators and balance themselves

Background Information:

Fishes vary by physical characteristics such as colour, shape, markings, number and type of fins, and type of mouth. Each characteristic tells us something about a fish's mode of living and the habitat in which it lives.

Habitat is the area where plants or animals live. Within that area, there needs to be the right space, food, shelter and water for each organism to live. Fishes have these same basic requirements.

Colour often relates to the specific area where a fish lives. Usually, fish blend in with their surroundings, thus avoiding their predators. For example, the speckled colours of Ontario's brook trout inter-mix with the leaves and gravel on the bottom of the streams they inhabit. The greenish-grey shades of the smallmouth bass provide camouflage that allows them to blend in with the aquatic plants where they live.

A fish's shape reveals its feeding patterns and the characteristics of the habitat in which it lives. The streamlined bodies of northern pike and muskellunge suggest their predatory nature; they are built for speed and quick attack. Fishes living in vegetated areas are usually short in length and have deep bodies. These physical characteristics allow them to make short, quick turns.

Lake Trout

Lake trout are generally found in open water, in relatively deep Ontario lakes. They prefer cold water, and will retreat below the thermocline (point at which the shallow, warmer waters meet the deeper, perpetually cold waters) during the warmer months. From fall through winter to spring, they move about freely throughout inland lakes. In larger lakes, they tend to remain in deep water (18-53 m in Lake Superior). Large, sleek and fast, these top predators need no shelter or protection, although they do spawn in rocky shallows. **Encourage students to place their lake trout singly in deep, open water.**

Rainbow smelt

Rainbow smelt don't like light and spend most of their time in the open, mid-water of lakes (24 m or more in Lake Erie). Fairly small (10-35 cm), rainbow smelt are food for larger predators and gain some measure of protection and shelter by forming large schools in the open water. **Encourage student to place their rainbow smelt together in the open water, about halfway to the bottom.** (The mural could have a few other rainbow smelt painted on it and one Velcro tab for the student to place cut-out)

Rock bass

Rock bass like warm, shallow water and are normally found in rocky areas near lakeshore or in the lower, warm portions of streams. Their short, stocky shape allows them to twist and turn easily among the sheltering rocks. **Encourage students to place their rock bass among rocks.**

Emerald shiner

Emerald shiners, often grouped with other small fishes as "minnows", live in large schools in the upper, open waters of lakes or large rivers, gaining a measure of protection in numbers. **Encourage students to place their emerald shiners together in open water near the surface.** (The mural could have a few other emerald shiners painted on it and one Velcro tab for the student to place cut-out)

Note: This is the only fish used that is not represented on the "Fish of Ontario" poster. None of the fish represented on the poster consistently spends much time in shallow, open water.

Pumpkinseed

Pumpkinseeds are a common, wide spread Ontario fish species. They prefer quiet, clear, shallow water, and the shelter of aquatic vegetation or submerged brush. They are found in small lakes, ponds, slow-moving streams and the quiet, weedy bays of larger lakes. **Encourage students to place their pumpkinseeds in shallow water among plants.**

Yellow Perch

Yellow perch are quite adaptable, and can be found in a number of warm to cool habitat in lakes, ponds or quiet rivers. They are most common in open, relatively shallow lake water near vegetation, forming loose schools. **Encourage student to place their yellow perch slightly off-shore, but still near some plants. They should be together, but not too crowded.** (The mural could have a few other yellow perch painted on it and one Velcro tab for the student to place cut-out)

Channel catfish

Channel catfish are found in deeper water among the sand, gravel or rocky rubble of the bottom. They will often hide during the day in holes among rocks or logs. The fish's barbells, or whiskers, are used to sense food, especially at night. **Encourage students to place their catfish individually in deep water among rocks, logs or debris.**

Clean Up procedures

Count all Picto-Puzzle cards (15) of all sets and put into proper container/envelope.

Count all Riddle cards (7) of all sets.

Place correct fish cut outs on the backs of riddle cards

Put into proper container/envelope
Roll up lake profile and put in proper container
Roll up Fish of Ontario poster and put in proper container
Collect pylons, relay race poles and relay fish models and put into proper container
While putting things away, check over props and materials and ensure they are in good quality for the next day

