



Osprey Survivor

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

What's the purpose of this activity?

This activity helps the students learn about osprey and how they depend on healthy fish for survival. The activity also introduces the concept of food chains and how contaminated fish can affect animals that eat them.

Key Messages:

- Osprey eat fish and need fish to feed their baby chicks
- Fish are only healthy if their water source is clean
- If water is polluted, fish carry these pollutants in their body, affecting other animals that eat them

Materials

- 1 hoola hoop (nest)
- 1 kiddy pool (pond)
- 4-6 sets of osprey wings
- 40 foam fish
 - 6 large pink fish; 2 small pink fish
 - 6 large blue fish; 2 small blue fish
 - 6 large yellow fish; 2 small yellow fish
 - 6 large red fish; 2 small red fish
 - 6 large orange fish; 2 small orange fish
- 6 pairs of rubber gloves
- 1 white board with dry erase marker
- 1 cloth to clean whiteboard

What will I be doing?

In this activity, students pretend to be osprey parents collecting fish to feed their osprey chicks. Each fish collected is worth points and some are toxic due to pollution and therefore are worth negative points. In order to survive, the osprey family must accumulate 6 points.

Start off by introducing the osprey, some of their

unique characteristics, where they live, what they feed on and what they look like. Engage the students by asking who has seen an osprey and what they know about them.

Stimulate their imagination by asking the students to imagine themselves as osprey flying over a pond or lake looking for fish to feed their young chicks.

Then describe how the activity works following the below procedure:

- Start off by pairing off everyone in the group and having everyone put on their wings and rubber gloves
 - If not enough wings for all in the group, then they will have to trade off (like a relay)
- All of the pairs start with at least one foot in the hoola hoop nest (which should be set up a distance away from the kiddy pool/pond)
- One member of each pair runs down to the pool and grabs any fish they want and returns to the nest (one partner must stay with the baby chicks)
- Only one fish can be grabbed at a time
- When the first student has arrived back at the nest, their partner can then run to the pool to grab one fish
- The pairs can "relay" from nest to pool until 1 minute is up
- At the end of 1 minute, calculate how many points each fish is worth, healthy fish are worth positive points, polluted fish are worth negative points
- A total of +6 points (or more) are needed to survive.
- Facilitators set the points for each colour of fish

Points:

Yellow Fish: +4 points ... Trees planted along stream helps keep stream and fish healthy

Red Fish: +2 points ... Buffer zone along lakefront houses and cottages is improved by planting shrubs

and wildflowers.

Orange Fish: +1 points ... Septic system is repaired allowing no seepage into lake.

Blue Fish: -2 points ... Pesticide spray on the lawn washes into the river.

Pink Fish: -3 points ... Motor oil accidentally is dumped into the lake.

Put the number of fish according to colour as indicated under materials in the pool. Adjust the number of as needed depending on group size and running speed.

NOTE: Change the points associated with each colour fish so groups watching the activity do not know which fish are worth positive or negative points!

Background Information

Ospreys live all across Canada near swamps, lakes, bogs and rivers. They choose nest sites that are close to shallow water with lots of fish.

Osprey choose places such as cliffs, dead trees and hydro poles to build large nests high off the ground to keep their chicks safe from predators. Their nests are usually made out of sticks and lined with soft materials like grasses.

In April and May, osprey will lay 2-4 eggs and their parents will take turns sitting on the eggs for about 40 days until the eggs hatch. Both the male and female osprey feed their young. In order to survive, the parents must deliver 3-10 fish per day to the nest. Due to their dependency on fish for food, osprey health is directly related to the health of the fish and water they live in. Pesticides and other chemicals that flow into water are absorbed into the flesh of the fish. These fish are then eaten by osprey and these toxins are passed on to the osprey.

In the 1950's, osprey populations became endangered due to pollutants such as DDT which resulted in the thinning of their eggshells and other health issues for osprey. When DDT was banned in the 1970s, osprey populations became healthier and rebounded.

Quick Facts

- Adult osprey weigh around 1.5-2 kg (3-4 pounds) ... about the weight of 3 basketballs
- Adult osprey have a wing span of 1.5-2 meters (5-5.5 feet) (point out someone about that height and have them spread their arms out. That is the approx. wing span of an osprey)

Clean Up procedures

- Shake off the osprey wings and place in the plastic container provided. Let the festival coordinator know if they are really wet, they may need to be dried overnight.
- Place all fish back into the container.
- Return hoola hoop and white board
- Place markers in container
- Empty the pool and place all the materials in or beside the pool for the next day.