

Teacher's Notes
Eagle Survivor

Overview of Activity:

In the Grand River watershed, there has been an increase in the number of Bald Eagles spotted along the river. Over the past 10 years, the watershed has become a prime wintering area for these birds of prey. You will learn all about eagles and how they catch food for survival.

Outcomes:

- Bald Eagles eat fish and need fish to feed their young
- if water is polluted, fish are unhealthy, and baby eagles cannot survive

Purpose:

- to learn how important healthy streams and rivers are to species living within the water shed.
- what are the positive and negative impacts on our streams and rivers, that will have an effect on the fish habitat and ultimately the fish
- what fish are local to your area, do some research to find out what fish live in your nearby stream/river

Materials Needed:

- 2 hula hoops (nests)
- wings for children to wear
- fish cut outs (paper/ fun foam/ cardboard)
- small 'pool' to be the source for fish
- game board (to obtain the value of each fish based on its health)

Setup and Playing the Game:

- divide the children into 2 teams if you have a number of them, or work together as one family of eagles
- if you are able to make 'wings' for each child out of felt and fun foam, have them wear them, if not use their arms as eagle wings
- make fish, with fun foam/ cardboard/ construction paper
 - find Fish of Ontario and cut out silhouettes of fish you would find in your local stream/ river
- have each eagle (child) start at their nest (hula hoop), one at a time (relay style), eagles will go to the fish source (river, stream, etc. – which is the small pool/ plastic table cloth) to grab **ONE** fish and then carry it back to their nest
- once each child has had a turn to get food for the eagle family, tally the fish they have collected Or set a timer if you want them to go more than once
- at the end of the time, each team collects their fish and calculates the number of points they have collected (match fish colour to the board value)

- fish are worth survivor points and some are marked for pollutants such as pesticides from run-off, oil spills, etc. with negative points
- a total of +5 points is needed for the eagle family to survive

Observations:

- What were some of the negative impacts/ contaminants that were harmful to the fish and eventually to the eagles
- What are some of the positive impacts that keep the fish healthy
- What can we do to prevent these negative impacts

Discussions:

Ask: “How much weight can Bald Eagles carry?”

- Bald Eagles weigh about 12 pounds and can carry fish up to twice their weight
- water needs to be clean, so that fish can be healthy, so the eagle population can survive

Ask: “Do Bald Eagles nest locally?”

- Yes, along the Grand River watershed, it has become a prime wintering and nesting area for these birds of prey

Ask: “What are some of the positive impacts on the river?”

- trees planted along the banks of the river, provides shade and cooler water temperature for some fish

Ask: “What are some negative impacts on the river?”

- Oil leaking/ leaching into the river from a spill
- Pesticide use close to the river, with rain fall will eventually leak into the river
- Chemical spill close to river, could leak into the river

Chart- Which fish will help the eagles survive? +5 points needed

Colour of fish	Impact	Points
Yellow	Trees were planted along a stream for healthy fish	+5
Red	Leak free septic systems helps make fish healthier	+3
White	Dumping motor oil down a drain is bad for fish health	-1
Blue	Pesticide spray on the lawn is bad for fish health	-2
Orange	Chemical spills into rivers and streams is bad for fish health	-3

Conclusions:

Once the children have completed playing the game and collected all the fish for their family, go through the fish that were collected and count the points they have.

For example: 3 Yellow fish (15 points), 2 Red (6 points), 2 White (-2 points), 3 Blue (-6) and 1 Orange fish (-3) = 10 points

Survival: Any total over 5 points, the eagle family survived.

If the number is less than 5, the fish were sick, so the eagles got sick and didn't survive. Have a discussion about how we can maintain healthy rivers and streams to ensure healthy fish for the eagles.

Background Information;

In case students ask lots of questions about Bald Eagles, here is some info:

- Wingspan 80.3 in or 204 cm
- Bald Eagles often go after other creatures' catches. A Bald Eagle will harass an Osprey until the smaller raptor drops its prey in midair, where the eagle swoops it up. Or may even snatch a fish directly out of an Osprey's talons. Fishing mammals (even people sometimes) can also lose prey to Bald Eagle piracy.
- Bald Eagles have been known to play with plastic bottles and other objects. One observer witnessed six Bald Eagles passing sticks to each other in midair.
- The largest Bald Eagle nest on record, in St. Petersburg, Florida, was 2.9 meters in diameter and 6.1 meters tall. Another famous nest—in Vermilion, Ohio—was shaped like a wine glass and weighed almost two metric tons. It was used for 34 years until the tree blew down.
- Bald Eagles can live a long time, with a longevity record of 28 years in the wild and 36 years in captivity.
- Bald Eagles occasionally hunt cooperatively, with one individual flushing prey towards another.
- Look for them soaring in solitude or gathering by the hundreds in winter.
- Bald Eagles suffered in the March 1989 *Exxon Valdez* oil spill in Alaska. An estimated 247 Bald Eagles died from oil exposure.
- Once endangered by hunting and pesticides, Bald Eagles have flourished under protection.