



Fish Roulette

Try to survive as a young osprey. Learn about competition and survival with this activity.

Activity

- 1) Explain to the students that they are going to become ospreys; ask if they know what ospreys eat (*almost exclusively fish*). How hard do they think it would be to catch enough fish to feed a nest full of babies?
- 2) Divide the students into random-sized groups of between four and six.
 - Assign one or two students within each group to be parent ospreys.
 - Give each parent two forks to hunt with; explain that the forks represent osprey talons
 - Some of the forks have tines broken off to represent an injured bird.
 - The remaining students are baby ospreys. Give each baby a cup, representing mouth and stomach.
- 3) Place the “nests” of ospreys at varying distances from the feeding area (large bowl with the beads in it).
 - Have the babies sit down together and tell them to make a lot of cheeping sounds and try to get as many beads from an adult as possible.
 - Tell the adults that when you say “Go” they are to run to the feeding area, pick up as many beads with their forks as they can, and drop the beads into the cup of one of their babies.
 - They may not put their hands over the forks to keep the beads from falling and they may not push another osprey.
 - They may go back to the feeding area as many times as they can before you say “Stop”.

Discussion

- 1) Ask the students to count the beads in their cups. How many of them have 3 or more beads?
 - Have them keep their hands up if they have 5 or more, 10 or more, and so on. Continue until only about 50-60% the students have their hands up. Then tell them that, unfortunately, this was the number of beads they needed to survive. The students with their hands down died of starvation.
- 2) In the game, what factors may have determined whether a baby osprey got enough to eat?
 - The number of babies in the nest
 - Whether there was one parent or two parents
 - How close the nest was to the feeding area
 - Whether either parent was “injured”
 - Competition from the other babies in the nest
- 3) Which of these factors would be an issue for real ospreys? (*All of them*)
- 4) Now tell the students that they were really playing “Fish Roulette”, and that some of the fish were contaminated with a high dose of pesticide that had washed into the water.
 - Ask the students whether any of them had 2 or more red beads in their cups. If they did, they are dead of pesticide poisoning.
 - Talk about DDT, which caused the populations of raptors, such as ospreys and bald eagles, to almost be wiped out in the bay.

MATERIALS

- Large bag of multi-colored pony beads or marbles; be sure there are some red ones in the bag.
- Large bowl or box to hold beads
- Plastic forks
- Small plastic cups