

## Catch Me If You Can

Age: Elementary School

### Objective

- To allow children to discover for themselves the advantages and disadvantages of different industrial fishing techniques.

### Background Lesson

There are an amazing number of different techniques for fish collection available to fishermen today. Unfortunately, in most cases the fishermen and the fish disagree on which methods are best. Two methods of fish collection that will be tested in this activity include handline and drift net.

Fishing by handline essentially means fishing with lines and hooks. This is one of the oldest methods of fishing. This method allows for high-quality collection as fish are alive when brought on board and specific species and size of fish can be targeted. This method is also relatively safe during spawning season as fish will usually only bite after they have spawned. A main disadvantage to this method is that it is much more work and more time consuming than other fishing techniques.

Drift nets are placed in water and allowed to drift with the currents. Drift nets can catch a very large number of fish in them at once, and fishermen must just come by and collect their catch periodically. Unfortunately, many non-target species are also caught in these nets including dolphins and sharks. Currently, there is a EU-wide ban on all drift nets due to their devastating effect on non-target species.

### The Activity

#### **Materials**

- Fruit ring cereal
- Paperclip
- Ladle
- Large bowl
- Timer
- Paper
- Glue

## **Procedure**

In this activity we will take a look at these two methods of fishing and discuss which method is preferable to fishermen and which is preferable to the environment.

1. Distribute to each group of students a large bowl filled with fruit ring cereal. Tell them they are fishermen and the cereal rings are their fish.
2. Give each student a paperclip and have them bend their paperclip into a hook shape.
3. Set a timer for one minute and tell students to catch as many fruit rings with their hook as they can. This represents the handline fishing method. At the end of the minute have the students count their catch.
4. Now, distribute a number of ladles to students. Have them scoop up as many "fish" as they can with the ladle. This represents the drift net fishing method. Have students compare the number of fish caught by each method.
5. Ask students which method they think is better for fishermen and which they think is better for the environment.
6. Now, tell students that the red loops are tuna. This is the target species. All other species are non-target and if caught they represent bycatch.
7. Set the timer for one minute again and have students scoop up as many "tuna" as they can. Then ask them to use the ladle to do the same.
8. Students should see that by the handline technique they have a much higher concentration of target species in their catch.
9. Have students take their drift net (ladle) catch and create a bar graph by stacking and gluing their loops onto a piece of paper. Tell them that blue loops represent dolphins, purple loops represent turtles, etc.

## **Post Activity Discussion**

- Ask students which technique is more harmful to non-target species.
- Why might it be a problem to catch species that we are not targeting?
- Ask students what other fishing techniques they know of and if they think they are more or less damaging to fish populations.
- Inform students on the ban on drift nets by the EU. Do they agree with this ban?

# **One Fish at a Time**