



# FISHING GAME AND TRACKING ENDANGERED FISH

Grades K-3/4-8



## FISHING GAME AND MAKE PIT TAGS

**K-3:** Students will play a fishing game.

**4-8:** Students make tags for endangered fish using binary codes.

### DIA DUIT!

5 min

### SNACK & FREE PLAY

30 min

### STORY TIME

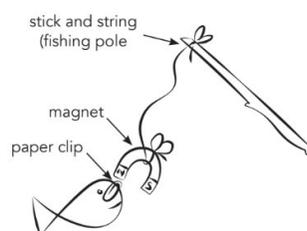
15 min

### STEM TIME

50 min

#### Materials:

- Pencils
- Worksheets
- Rocks or test tubes of water
- Tape
- Scissors
- Coloring utensils
- Paper clips
- A magnet tied to a string (multiple)
- A stick to use as a fishing pole (multiple)
- Measuring tape
- Weighing scale



### Dia Duit is Irish for hello! (pronounced Jee-ah Ghwitch)

Greet your students. Be friendly. Use their name, ask a question, give a high five, or thumbs-up! Take roll. Mark down which students took a snack and tally how many snacks were given out.

### Enjoy Free Play:

Students will have their snack and enjoy time to free play.

### Read the story:

Read to your students outside as they sit in a circle. Older students may choose to read their own books.

### Grades K-3: Fishing Game

Go magnet fishing for paper fish with paper clips attached. When you catch a fish, give it a check up and record its information.

### K-3 Instructions:

Say- "The razorback sucker and the pike minnow are endangered, which means they are at risk of extinction. Ecologists introduce farm-raised fish to the wild and watch them as part of a recovery program."

What you'll do:

**STEM coaches, please prepare multiple test tubes filled with varying amounts of water, and give these to the students when when they catch a fish. These are found on the STEM shelf.**

Step 1: Each student will prepare 4 fish for their classmates to catch during the game. Color your fish, name it, give it a unique binary code and cut it out. Put a paper clip on your fish.

Step 2: Go magnet fishing outside! Students may line up on the sidewalk with the fish laid out on the grass (the magnets will break if they hit the sidewalk). When you catch a fish, record which fish you caught. Make a note of its binary code.

Step 3: Practice measuring! Measure the length of your fish. Weight it (tape it to a rock or test tube filled with water).

## STEM TIME

50 min

*\*If the school does not have microscopes, then have the older students do the fishing activity with the younger students.*

### Materials:

- 1 test tube of rice
- 1 dish of oil clay
- Meeka microscopes
- Petri dishes
- Tweezers
- Pencils
- Worksheets

## SPORTS / GAMES

25 min

*\* Older students may choose to practice their sport instead of playing the game of the day.*

### Actions:

- The directions and associated actions that the fisherman can call out include: high tide- skip, low tide- tip toe, whirlpool- spin in circles, waves- sway from side to side, and coral- jump in the air.

## HOMEWORK / FREEPLAY

20 min

## CLEAN UP / DISMISSAL

 [www.stemelop.com](http://www.stemelop.com)

## Grades 4-8: Tracking endangered fish

### 4-8 Instructions:

1. Watch the teacher prep video before administering this activity.
2. Show students the in-class videos for this activity.
3. With their lab sheet and on the smart board have some volunteers demo how to fill in a 4 space pattern. After a few students come up and enter in binary patterns using only 2 numbers have the class work at filling out the lab sheet. If students finish early have them help others.
4. Let half the class stand up to get their microscopes while the other half comes to a table to get a petri dish with some rice grains, a little piece of clay to hold the rice grain still, and some tweezers.
5. Let the class know they are going to make their own pit tags like the biologists used in the movie using rice grains. Students may need to sharpen their pencils. Demonstrate how they will place a little bit of clay in their petri dish to hold a rice grain. Then they can look through their microscope while they try and write a binary code on the grain. Show them that they will need to be careful scientists and to raise their hands if they need help. Challenge them to code all the rice grains on their sheet. They can even write binary messages on their grains. Optional: In the microscopy Koa there will be small vials for students to put their rice grains in and you can tie some yarn around it so they can show off their amazingly small codes.

### Fishes in the sea

Instructions- Students will stand in a circle. The instructor will alternatively name the students pufferfish, angelfish, clownfish, and parrotfish. One student will be chosen to be the fisherman. The fisherman will stand in the middle of the circle and be the caller. When the fisherman calls a fish name, they will also call out a direction associated with an action. All of the students within that category will move around the outside of the circle and perform the action until they reach their place in the circle again.

For example, when the fisherman calls out parrotfish-high tide. All the students in the parrotfish category will skip around the circle and back to their places. The last student to make it back to their place is “caught” by the fisherman, and this student then becomes the fisherman. The game continues until decided upon by the STEM coach.

### Instructions:

Allow your students some homework time. If they need help let them know you can help them. If they do not have any homework they can have some reading time, or they can have free time to go outside and play.

### Clean up/pack up/dismissal

Clean up, pack up and practice lining up.