

Fishing Dolphins?

(Post visit)

Grade Level: 2nd-5th

Purpose: This game, similar to Marco Polo, demonstrates how dolphins use echolocation to find prey such as fish. Students take turns being the “dolphin” and “fish” and use sound to locate the “fish”.

Materials:

- Open area
- Blindfolds

Teacher Background Information:

Dolphins and other toothed whales often use sound to navigate their world and locate prey. Echolocation is when sounds are emitted and the animal analyzes the returning echoes. Using the returning echoes, dolphins can estimate the size, shape and distance of the object. Dolphins use the melon to produce high-pitched clicks (ranging from 40-150kHz), which are sent through the water, bounce off the object and are echoed back to the dolphin and received along their lower jaw. The lower jaw contains cavities that are oil-filled. These cavities amplify the signal allowing the dolphin to interpret the information.

Procedure:

- 1) Pick one student to be the dolphin and two students to be the fish. Have the other students form a large circle around the three students. The ring of students keeps the three “animals” together and helps prevent the blindfolded student, the “dolphin”, from hurting himself or herself. If the “dolphin” gets too close to the other students, walls, trees, etc. then the students in the ring chant “ocean”. This tells the “dolphin” to turn around.
- 2) Blindfold the student that will be the “dolphin” and spin them around so they lose their direction. This starts the game. As the “dolphin” starts to hunt, they say dolphin and the two students who are the “fish” respond or echo back by saying fish.
- 3) Using the sound of the “fishes” voice, the “dolphin” will try to tag the “fish”. Once tagged those “fish” are eaten.
- 4) Continue the game until the “dolphin” tags both of the “fish”. Switch roles, involve other students and feel free to add in any complications (add in other noise to simulate ship sounds) that you would think will add to the experience.

Discussion Questions:

- 1) Why would sound be more useful in the ocean than visual cues?
- 2) If other sounds were added in, was it easier or harder to find your prey?
- 3) What are baleen whales and how do they differ from toothed whales? Why do toothed whales use echolocation but not baleen whales (think about their method of eating)?