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Sound Location (Passive)

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Date:

Objective:

In this exercise participants use their ears to determine the direction different sound originate.

Vocabulary Words:

Materials:

Blind fold

Background Information:

This is an exercise for 5 to 10 participants although as few as 2 may successfully complete the demonstration.

The basic concept of this exercise is based on the game "Marco Polo" usually played in a pool.

Activity Instructions:

- One person is chosen as the "ship" and stands in the center of a circle. This person faces one direction and never moves.
- The others all stand at the edge of the circle spaced equally apart and play the part of targets.

- Place the blindfold over the "ship's" eyes and then hold both arms out in front with palms facing each other - this forms the ship's bow.
- The ship should imagine they are standing in the center of a clock with their hands facing 12:00, 3:00 is on their right, 6:00 o'clock directly behind them and 9:00 on their left.
- Have the other participants start making whooshing noises at various volumes.
- The "ship" should be able to determine the directions the "targets" are by using either their left or right arm to point at them - always maintaining their "bow" pointed at 12:00.
- Try having some the "targets" vary their distance from the "ship" to see if the "ship" can determine which, if any, are getting closer.

Conclusion/wrap up:

This exercise demonstrates how passive Sonar systems "listen" for other ships while at sea. There are other sounds that may be heard through the Sonar system such as whale song, snapping shrimp, and porpoises.

Further Investigations:

You can further your knowledge of natural sounds by using your computer to search online for "whale song", "shrimp noises" and "porpoise sounds". There are many different types of whale song and you'll even find the sound profiles that accompany the recordings.

Sources:

Good activity for fantail