KELP SAILORS FOR THE SEA

KIDS ENVIRONMENTAL LESSON PLANS

This lesson developed by:

NEW BEDFORD WHALING MUSEUM

Whale of a View

Overview:
To view your surroundings from the perspective of a whale and understand the difficulty of finding things around you.

Ocean Literacy Principles:

5. The ocean supports a great diversity of life and ecosystems
7. The ocean is largely unexplored

Key Concepts:

- Whales have monocular vision, meaning their eyes are on either side of their head.
- Monocular vision allows both eyes to be used separately, which increases the field of view, but limits depth perception.

Materials:

- Scissors
- Tape
- Paper towel tube per student
- 2 small mirrors that fit in paper towel tube (can be found at a craft store)

Duration:
30 minutes

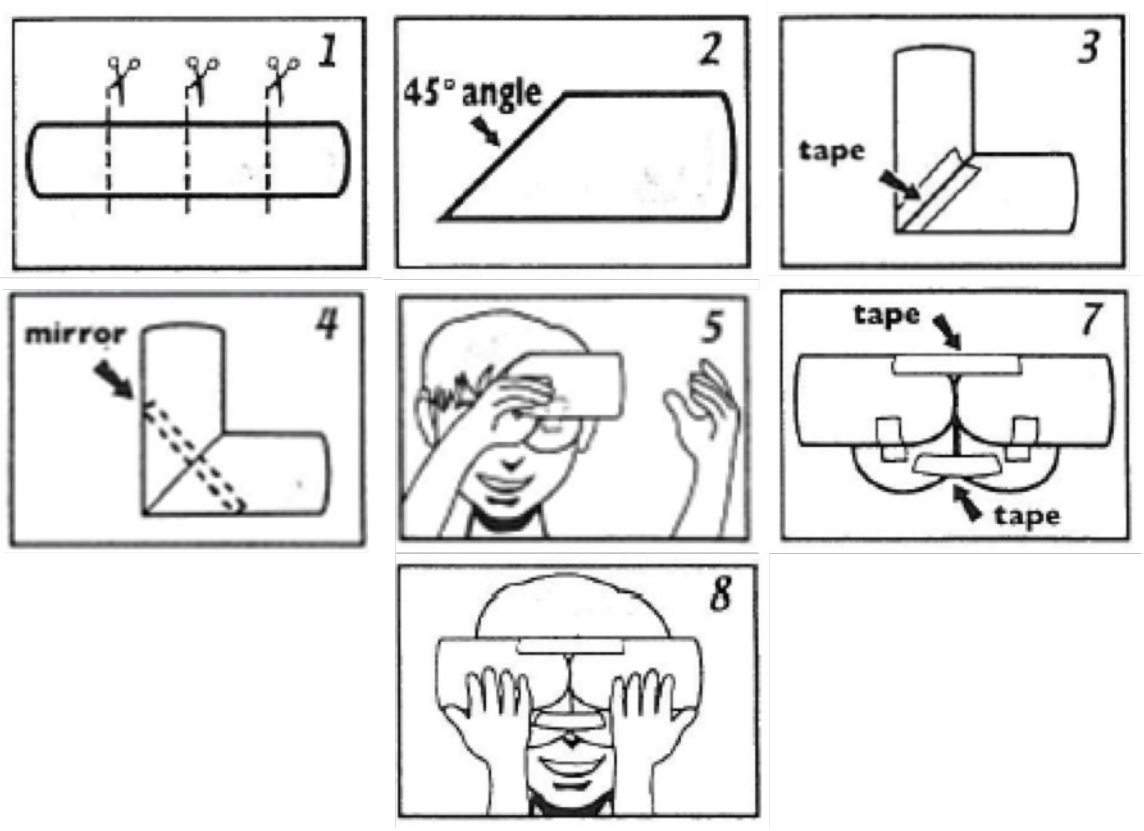
Physical Activity:
Moderate

Whale of a View (cont.)

Background:
Your eyes are in front of your head. So you see what is in front of you and some of what is on either side. With both your eyes you see one view. This is called binocular vision. But whales' eyes are on the sides of their heads. Each eye sees a separate view. This type of vision is called monocular vision. In this experiment, you'll find out what it's like to have monocular vision.

Activity:
Follow along with the pictures:

1. Have an adult cut the paper towel tube into four equal pieces.
2. Have the adult cut one end of each piece at a 45-degree angle.
3. Tape the angled ends together as shown. Repeat with the other two pieces.
4. Have the adult insert the mirror into a tube at a 45-degree angle, as shown.
5. Hold your left hand up at eye level slightly to the left under and in front of you. Look into the tube with your left eye as shown. If you can't see a reflection of your hand at first, adjust the mirror until you can.
6. Repeat steps 4 and 5 with the other mirror and tube as shown.
7. Tape the pieces together.
8. Hold the "monoculars" up to your eyes.



Whale of a View (cont.)

Discussion:
Point your "monoculars" towards different points in the room. Place objects in different locations and take turns trying to walk over to them. Pose the following questions:

- Are you able to see what's in front of you?
- Can you simultaneously focus on everything you are seeing?
- Of all your senses, would you rely most on your sight if this is how well you were able to see?
- How is this helpful or harmful to whales? For instance, whales are often unable to see rope from fishing gear that is in front of them and may become entangled. However, having eyes on the side of the head enables whales to have a wider range of vision.