



The Marine
Mammal Center.

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How Much Can an Entangled California Sea Lion Eat? Marine Debris and Entanglement Activity

Grade Level: 3rd to 6th

Objectives

Students will learn about different types of marine debris.

Student will simulate an entangled animal and draw conclusions.

Background Information

Marine animals constantly face the threat of entanglement or ingestion of trash called marine debris. An animal can become entangled in plastic strapping or fishing nets. Marine animals also may swallow plastic objects, plastic bags, balloons, and fishing lures. If an animal becomes entangled, the debris can affect its mobility and cut into the animal, causing infection or strangulation. Often animals are entangled around the neck or mouth, which prevents them from feeding. When plastic debris are swallowed, they remain in the animal's stomach, so that it may not be able to feed or feel hungry. In this activity, students will understand how difficult it is for an entangled animal to feed. For more information go to The Ocean Conservancy's web site page about Marine Debris at www.cmc-ocean.org/mdio/facts.php3.

Materials

Rubber band for each student

Small pieces of colored paper or candy (e.g. M&Ms)

Paper cups

Procedure

1. Discuss trash in the ocean and introduce the term marine debris. Talk about the ways that trash can affect marine animals and define the terms entanglement and ingestion. Have the student list types of marine debris and how marine animals can be affected.
2. Each student can be a California sea lion (or any marine animal of their choice). The student's hand will represent the sea lion's head, with their fingers being its mouth. The rubber band represents a packing strap or fishing net and the colored pieces are sea lion food. Additionally, the different colored paper should represent different things animals may ingest (e.g. green = fish, red = invertebrates, yellow = plastic bags). Do not tell the students what

the different colors represent until they review what they have eaten later in the activity.
Important: Students should be serious about this and not think of this activity as a contest.

3. Divide the students into groups or have each student work individually, doing the trials as a whole group. Set out the colored paper. Now the sea lions have 10 seconds to catch their food. Using one hand only and placing the food they catch in a cup. Count the number of food items in the cup. Record the totals for each color and the grand total of food items caught.
4. Have students wrap the rubber bands around their fingers simulating a sea lion whose snout is entangled. Since sea lions do not have hands with fingers, can the sea lion remove the debris? Have the students think about this and discuss.
5. Make sure that all sea lions are still entangled. Set out the colored paper again. The sea lions have 10 seconds to catch food again with only their entangled hand. Count the number of food items in the cup. Record the totals for each color and the grand total of food items caught.
6. Have the students compare how much more food a healthy sea lion can catch versus an entangled one.
7. Now tell the students what the different color paper represent. Have them calculate how much food and plastic the sea lion ate. If they have mostly plastic, then they have not eaten enough food to survive? Discuss what other ways an entangled animal could die. Discuss what people can do to keep prevent marine animal's deaths due to entanglement and other marine debris.

Extension

Follow up with a beach (stream, river or watershed) clean up. Have the students record the types of trash they find and weigh what is collected. Discuss and do other activities as a class or at home to decrease the amount of trash on land and in water.