



BUILD OTTO THE SEA OTTER

This lesson plan developed by:



Overview:

Sea otters are essential to the kelp forest and estuary ecosystems they inhabit. They feed on invertebrates, such as sea urchins which left unchecked can decimate kelp forests. In this activity, students will create a sea otter puppet and act out a story about Otto the sea otter's life.

Materials:

- Otter puppet pieces handout
- Paper lunch bag
- Scissors
- Glue
- Crayons or markers
- Yarn or pipe cleaners

Duration:

30-45 minutes

Physical Activity:

Moderate

Background:

The sea otter (*Enhydra lutris*) is the only otter species that is fully aquatic, meaning they spend their whole lives in the water. There are three subspecies that are found in different geographical areas: the southern sea otter (coast of California), the northern sea otter (coast of Alaska and Washington), and the Russian sea otter (coasts of Russia and Japan). Sea otters live in kelp forest and estuary habitats. They are known as keystone species, meaning other species largely depend

Build Otto the Sea Otter (cont.)

on and are influenced by their behavior. The health of a sea otter population is a good indication of the health of other species and ecosystems nearby.

In kelp forests, sea otters eat sea urchins and other animals that graze on giant kelp. If urchins go unchecked, they can decimate kelp forests and create “urchin barrens” where nothing else lives. As a top predator of invertebrates, sea otters help keep urchins and other shelled invertebrates under control, so that kelp forests and estuary habitats can thrive. These important ecosystems can then continue to support a biodiverse community of plants and animals.

Sea otters eat a variety of invertebrates including crabs, urchins, clams, mussels and snails. While an otter is hunting, it may stash its prey in the loose skin or pockets found under each forearm, to leave its paws free. They float on their back on the surface of the water and use their chest as a table while they eat their food. Sometimes they even use a rock to crack open their prey.

Unlike other marine mammals, sea otters do not have blubber to keep themselves warm. Instead they have two dense coats of fur. They blow tiny air bubbles into their fur, which help keeps them warm, dry and buoyant. Unfortunately, sea otters were nearly hunted to extinction for their fur pelts. Conservation efforts continue to help this species populations to increase. However, they are still threatened by disease, oil spills, pollution, habitat loss and boat strikes.

Activity:

Part 1: Introduction to Sea Otters and Kelp

Ask the whole group the following questions:

- What is a keystone species? What are some examples?
- Why is the sea otter a keystone species?
- Why is the kelp forest habitat important for sea otters?

Part 2: Build and Play with Otto the Sea Otter

1. Print and color the otter puppet pieces.
2. Cut out all of the pieces.
3. Glue the otter’s head to the bottom of the lunch bag. Glue the body, paws and flippers to front of the bag. Glue the tail to the back of the bag. Use yarn or pipe cleaners to make whiskers by gluing them to the face of the otter.
4. Ask students to make up a story about Otto the sea otter and then act it out using their otter puppet. Feel free to include their food items (clam and sea urchin) and the rock that some otters use to break open their food.

Discussion:

Ask the whole group the following questions:

- Why are kelp forest important ecosystems?
- What would happen if the sea otter population disappeared? How would that impact the whole ecosystem?

Build Otto the Sea Otter (cont.)

- What are some current threats to sea otters?
- What can we do to help protect sea otters from these threats?

Ocean Literacy Principles:

Ocean literacy is an understanding of the ocean's influence on us, and our impact on the ocean. There are seven [Ocean Literacy Essential Principles](#) that all people of our blue planet should have an opportunity to learn and understand. This activity touches upon the following Essential Principles:

4. The ocean makes Earth habitable
5. The ocean supports a great diversity of life and ecosystems
6. The ocean and humans are inextricably interconnected

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Paw



Paw



Tail



Flipper



Flipper



