

## **LESSON PLAN: SEA OTTER**

### **Students will:**

Identify animals, more specifically mammals, and their characteristics  
Identify what sounds the animals make  
Spell different animals names  
Research animals and put that information to use  
Compare maps of where sea otters once lived to today  
Understand why sea otter fur was so desirable and how this almost proved fatal for the otter.  
Use songs, books, pictures, and the Internet to accomplish most of these objectives

### **MATERIALS**

Fur War book section on sea otters  
Sea Otter Rescue by Suzi Esterhas  
Lootas Little Wave Eater: An Orphaned Sea Otter's Story by Clare Meeker  
Return of the Sea Otter: The Story of the Animal That Evaded Extinction on the Pacific Coast by Todd McLeish  
The Death and Life of Monterey Bay by SR Palumbi and C Sotka  
Guide to Marine Mammals of Alaska by Kate Wynne

Brown butcher paper, about 20 feet long  
Scissors  
Green bulletin board paper  
Stapler  
Plastic bags  
Sand or salt (to use in plastic bags, as weights)  
Foam blocks  
Foam ball and toothpicks  
Red spray paint (optional)  
Clay

### **COMPARING MARINE MAMMALS**

Objective: Students will be able to identify common marine mammals and compare and contrast them with land mammals.

Introduction: Does anyone know what a marine mammal is?

Read: Fur War pages .... and also Sea Otter Rescue and Guide to Marine Mammals.

Step 1: Review the characteristics of mammals: they have hair or fur; they have two or four legs; their babies are born live (discuss difference between "egg laying" and "live bearing.") Review the characteristics of marine mammals (percentage of life lived in water, warming adaptations, water adaptations).

Step 2: Students will be able to identify which animal is a marine mammal when shown two animal pictures. "Why is or is it not a marine mammal?"

Read a characteristic or fact from a marine mammal (otter, whale). Have students take turns identifying which marine mammal the fact describes.

Step 3: When a student guesses correctly, ask him or her to add another fact about that animal.

Conclusion: All students should be able to explain why an animal is a marine mammal.

## **SEA OTTER LIFE**

Students will learn the family history of sea otters.

How the mother fluffs up the baby so it will float when she is away hunting. How they wrap themselves in kelp to sleep

How they use tools to open shellfish

## **SEA OTTER PREDATORS**

Objective: Students will be able to understand the predators sea otters face in the wild.

Introduction: Read Lootas Little Wave Eater: An Orphaned Sea Otter's Story by Clare Hodgson Meeker.

Step 1: Play a game called Whale and Otter. Go outside to the playground area. Mark out a rectangular playing area. On one end, place paper sea urchins (sea otter food) that you or your students have made. In the center area, place about four hula hoops, which represent the kelp forest.

Step 2: Break your students into groups: orca whales and sea otters. Try to have one whale per four otters. Have the orca whales start at one end, swimming around the "ocean" (field). The object is for the sea otters to cross the ocean three times and get a sea urchin each time without being "eaten" (tagged) by an orca whale. Otters can "hide" in the kept forests and are safe from the whale, but can only stay there for one minute.

Step 3: The mother sea otters must get five sea urchins. Have one handicapped sea otter who has survived an attack by a killer whale. He has to hop on one foot. Play several rounds varying the ratio of whales to otters.

Conclusion: Discuss and graph the results of each round.

## **SEA OTTER FUR TRADE**

Objective: students will be able to explain why sea otter fur was so valuable

They will be able to identify the flags major countries involved in the fur trade

Students will understand why the sea otter almost became extinct (and what that means)

## **SEA OTTER HABITAT**

Objective: Students will be able to make a model of a kelp forest.

Introduction: Sea otters live in kelp forests. Have the students make a model of a kelp forest.

Step 1: Using a piece of brown paper about 20 feet long, cut a "kelp stripe" about four inches wide.

Step 2: Next, have students make the kelp leaves out of green bulletin board paper. The length of the leaves should be about one foot. Make sure they make a "bladder" at the base of each leaf. Staple the leaves along the sides of the stripe. Hang the stripe from the ceiling of the classroom. To make a canopy, staple some of the stripe across the ceiling.

Step 3: Make a kelp holdfast out of baggies filled with salt or sand. Make rocks out of foam blocks, spray painted gray. Place the holdfasts on top of the rocks.

Step 4. Make sea urchin with the foam ball and toothpicks

Step 5 Students can also make large fish and sea mammals to suspend from the ceiling. They can make starfish out of clay and put them on the ground.

Conclusion: Students will be able to read in their new kelp forest and can describe sea otter habitat.

## **SEA OTTERS AS KEYSTONE SPECIES**

Objectives: Students will understand how sea otters benefit kelp by eating sea urchins

They will also understand how kelp helps sea otters, fish and shellfish

## **EVALUATION**

After engaging in the activities, students should be able to answer the following questions:

What makes sea otters special?

Where do sea otters live?

What is a marine mammal, and which animals do we classify as marine mammals?  
What do sea otters eat?  
How do sea otters benefit kelp and many other species  
How do we use the internet to find more information on sea otters

In part adapted from Sea Otters Scholastic.com