



*Kids at a powwow, photo courtesy of [The Confederated Tribes of the Grand Ronde](#).*

**WISDOM OF THE ELDERS RADIO: SERIES 3, PROGRAM 7  
HONORING GRAND RONDE  
GRADES 4-6 \* ENVIRONMENTAL STUDIES**

*Lesson plan written by Elaine LaBonte.*

**SUBJECT AREAS**

To be defined following completion of all lesson activities.

**SKILLS**

To be defined following completion of all lesson activities.

**LEARNING OBJECTIVES**

After completing the lessons in this Sea Otter Series, students will be able to:

- Identify the Tribes and/or ancestral homelands of the Confederated Tribes of Grand Ronde and to describe the cultural role that sea otters have to these Tribes
- Discuss keystone species in general, and sea otters specifically and the impact they have on kelp forests
- Discuss the historical impact of fur traders to the sea otter population, and consider what can be done to help the sea otter populations come back
- Engage with current scientific methodology through conducting a kelp forest experiment, as well as comparing this methodology to the native scientists' methodology, which has created a body of knowledge commonly referred to as Traditional Ecological Knowledge
- Consider the responsibility of individuals, communities and society as a whole to other species, other cultures and to future generations yet to come

**INTRODUCTION**

Historically, as well as pre-historically, Native Americans have defined their culture largely dependent upon the natural resources that occurred within their geographic region and environmental features found within their ancestral homelands. During the five lessons that follow, students will be provided with a worldview very different from their own. They will learn about the role of sea otters in the ecosystem and as a keystone species. Students will be introduced to the concept of Traditional Ecological Knowledge (TEK) and through exposure to TEK, will come to appreciate the complex scientific study that Native Americans practiced long before the current and universally accepted scientific methodology developed. Students will be introduced to the Confederated Tribes of Grand Ronde and learn the cultural role that sea otters have to Native Americans.

## Overview

Lesson 1: Introduction to Relationships between Humans and the Environment

Lesson 2: Keystone Species and the Food Web

Lesson 3: Native Americans, Science, and Salmon

Lesson 4: Native Americans and Science

Lesson 5: Dangers to Sea Otter and Responsibility of People

## GUIDING QUESTIONS

## PREPARING TO TEACH THIS LESSON

If at all possible, invite a tribal member to discuss the sea otter and its cultural importance.

Resources include:

- David Hatch at the Elakha Alliance: <http://www.ecotrust.org/nativeprograms/elakha.htm>
- Elizabeth Woody at Ecotrust: <http://www.ecotrust.org/nativeprograms/index.html>
- The Confederated Tribes of Grand Ronde: <http://www.grandronde.org>

Other resources for possible guests include:

- Turtle Island Storytellers: <http://www.turtleislandstorytellers.net/>
- Northwest Spirit Quest, Inc.: Elaine.nwspiritquest@dish.net

## SUGGESTED ACTIVITIES

## **Lesson 1: Introduction to Relationships between Humans and the Environment**

### **Standards**

#### ENGLISH LANGUAGE ARTS

- EL.06.RE.05—Demonstrate listening comprehension of more complex text through class and/or small group interpretive discussions across the subject areas.
- EL.06.RE.06—Listen to, read, and understand a wide variety of informational and narrative text.
- EL.06.RE.09—Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.
- EL.06.RE.20—Clarify understanding of informational texts by creating simple outlines, graphic organizers, diagrams, logical notes, or summaries.

### **CD Segments to Play**

### **Background**

### **Suggested Strategies**

- In preparation for this lesson, go to this site (if you don't have computer access in the classroom) and tape record the various sounds the sea otters make: <http://www.seaotters.org/Otters/index.cfm?DocID=63>
- Go to <http://www.seaotters.org/Otters/index.cfm?FuseAction=Photos> and print out color photos of sea otters.
- Go to <http://www.seaotters.org/Kids/index.cfm?DocID=38> and print out and copy this word search.

### **Activities**

#### 1. Listen

Listen to *Sacred Landscape* segment, Wisdom of the Elders Radio: Series 3, Program 7, Grand Ronde.

#### 2. Discuss

Following this short segment, ask the students questions to determine their exposure to sea otters and/or to Native Americans:

- Do you know what sea otters are?
- Do you know what a kelp forest is?

- Have you ever heard of a keystone species?
- Have you heard of the Confederated Tribes of Grand Ronde (CTGR)?
- If so, do you know where their Reservation is?

Talk to the class about the way that Native American people view the world. Many tribes consider all things are related to each other. All things include fish, animals, plants and trees. The sea otter, though it no longer is found within the Oregon coastal areas is still very important to the CTGR. Historically, as was heard in the Wisdom of the Elders segment, the sea otter was very important to the Tribes in Oregon.

### 3. Read

#### **A story about sea otters**

### 4. Analyze

Show the class the photos of the sea otters and if you have access to computer in the classroom, go to this site: <http://www.seaotters.org/Otters/index.cfm?DocID=63>. Otherwise, play the tape recording that you made of the sea otters and have the students listen to the various sounds and have them guess what the sea otters are communicating.

### 5. Puzzle

Pass out a word search and have the students complete it.

### 6. Writing exercise

Have the students write a one-word sentence about each of the words in the word search (Otter, Ears, Paws, Fur, Clam, Crab, Turban Snail, Mussel, Sea Urchin, Abalone) and how they think the word is associated with the sea otter. Use the word search and their description of the words (they are either parts of the sea otter or foods that the sea otter eats) and have them start a Sea Otter Portfolio.

## **Lesson 2: Keystone Species and the Food Web**

### **Standards**

#### LIFE SCIENCE

- SC.05.LS.05—Describe the relationship between characteristics of specific habitats and the organisms that live there.

- SC.05.LS.05.02—Identify the producers, consumers, and decomposers in a given habitat.
- SC.05.LS.05.03—Recognize how all animals depend upon plants whether or not they eat the plants directly.

## **CD Segments to Play**

### **Background**

The plant leaf uses the sun's energy and uses the nutrients, water and carbon dioxide to make carbohydrates (a carbohydrate is stored chemical energy, commonly called a calorie).

The root of the plant (like a straw) sucks water and nutrients from the soil.

Decomposers living in or on top of the soil break down plant material into nutrients; they need to have energy to do so.

The sun is the only source of energy for life to exist. Without the sun, the plants could not change carbon dioxide into oxygen that we need to breathe. Without carbohydrates, no living organism can survive.

When scientists conduct experiments over and over again with the same results, these are called laws (this is not a common occurrence). Thermodynamics is an area that has been extensively studied and laws have been discovered. The first law states that energy cannot be created or destroyed. The second law states that when energy is changed, some energy is lost.

What this means is that the sun (the only energy source) has a limited amount of energy. All organisms in an ecosystem are connected in a food chain or food web. There are several trophic (energy) levels.

A trophic level describes the relationship between energy and how far away from the energy source the organism is (remember, this is the plants). There are five trophic levels:

- Primary producer: these are the plants.
- Herbivore: this is an organism that eats only plants.
- Omnivore: this is an organism that eats plants and meat.
- Carnivore: this is an organism that eats only meat.
- Top carnivore: this is an organism that eats only meat, the term "top" means that it has no natural predator.

Plants are the only things that are able to convert the sun's energy into a form that we all can use to survive. All other living organisms need to obtain the energy from plants or from other organisms that eat plants. The further away

from the plant source, the more food the organism must eat to get enough energy to survive.

## Activities

### 1. Research

To begin the lesson, introduce basic components of an ecosystem, the foundation for all life. The components of a simplified ecosystem are: nutrients, water, oxygen and the living organisms. Energy (from the sun) is the vital component that fuels the ecosystem. A very basic and easy to understand model of an ecosystem can be illustrated with a simple potted plant. Have the students think about the five components (nutrients, water, oxygen, living organisms, energy) and how they relate to the potted plant. Make five columns on the chalkboard labeled with the five components. Have the students make the same chart and follow along with you. (This Ecosystem model should be added to their Sea Otter Portfolio.) Ask the students how each of the other components relate to the potted plant.

Nutrients	Water	Oxygen	Living Organism	Energy
X	X	X	Plant Leaf	Convert
X	X		Plant Roots	Use
X	X		Decomposers (fungi and bacteria)	Use

Explain to the class that plants make their own food with the assistance of the sun, water, nutrients and oxygen.

### 2. Discuss

Ask: How do sea otters fit into this system?

Sea otters are a living organism that eats only sea animals. Sea otters must eat about 25-30% of their body weight every day, an adult sea otter weighs between 45-60 pounds; so if a 60 pound sea otter ate 25% of its weight, it would need to eat 15 pounds of food every day.

Sea otters live in the ocean in an underwater forest called a Kelp Forest. A Kelp Forest looks like giant leaves, they grow from the bottom of the ocean all the way to the top. Kelp is actually giant seaweed, which is algae. In a kelp forest live different kinds of algae (besides the giant kelp).

Inside of the kelp forest live fish, sea urchins and other sea life. Sea otters like to live by the kelp forests. They roll around in the kelp leaves so they are all wrapped up when they rest!

Ask: Why do you think they wrap up in the kelp leaves?

The obvious answer is to keep warm, but scientists think it's so they can sleep and not float away. Sea otters have the thickest fur of all sea animals—so thick their body doesn't even get wet! Imagine this: sea otters have 850,000 to 1 million hairs per square inch of their body. To compare this to humans, we have about 20,000 hairs on our whole head! Now, that's a lot of fur.

## **Lesson 2, Day 2**

### **Standards**

#### LIFE SCIENCE

- SC.05.LS.05—Describe the relationship between characteristics of specific habitats and the organisms that live there.
- SC.05.LS.05.02—Identify the producers, consumers, and decomposers in a given habitat.

#### ENGLISH LANGUAGE ARTS

- EL.06.RE.20—Clarify understanding of informational texts by creating simple outlines, graphic organizers, diagrams, logical notes, or summaries.

### **CD Segments to Play**

#### **Background**

The sea otter is considered a keystone species. A keystone species is a species that is so important to an ecosystem that when it is gone the entire ecosystem is at risk. As you heard in the Wisdom of the Elders segment, from the early 1700s until a law was passed in 1911 that made it against the law to kill sea otters, fur traders killed sea otters to the point of near extinction. As the sea otter population got smaller, the sea urchin population grew and grew because there was nothing to eat the sea urchins. As a result, the kelp forests were eaten up by the sea urchins. What is left behind is called an urchin barren. When kelp forests disappear, there is no habitat or shelter for the fish and other sea animals that need the kelp forest to survive. Another thing that happens is that because the kelp is gone, there are no plants to convert the sunlight into a useable form.

The ban on killing sea otters saved the populations that lived in Alaska, but the sea otters that once lived up and down the coast of the Pacific Ocean were gone. In 1938, a small group of sea otters were seen near Carmel, California. Scientists began watching changes in the ecosystem. The sea otters began eating the sea urchins and the kelp forests began coming back. Along with the kelp forests came fish species that needed the kelp forests. There are many groups of people—Native American tribes, scientists, universities and others interested in bringing back the sea otter—that work together trying to help the sea otter populations come back. Recently a few sea otters were seen off the Oregon coast. This was great news! Scientists and other interested people are all working together to try to help the sea otters re-populate areas where they once lived.

### **Suggested Strategies**

- In preparation for the second day of the lesson, you will need to get small balls of string, one ball for each paired-up student.

### **Activities**

#### 1. Discuss

Ask: What do you think that sea otters eat? Have them look at their word search for help.

Sea otters eat abalone which lives on the sides of rocks. They love to eat sea urchins which live in the kelp forest. They also like clams, crab, turban snails, mussels, shrimp, octopus and fish.

Ask: Remember the energy chart we made yesterday, if the sea otter only eats sea animals, what does that mean about the sea animals?

All of the sea animals must eat plants or other animals that eat plants to survive.

#### 2. Play a game

##### **The Food Web Game**

- Write four living organisms on the board: sea otter, sea urchin, fish, and kelp.
- Pair the students up, and divide the pairs equally between the four organisms. Have each student write the name of their organism and place it on their shirt. Have the pairs of students stand in a circle, each pair gets one ball of string.
- Tell the students who eats who:

- a. Sea otter eats sea urchin and fish, but their favorite food is the sea urchin.
  - b. Sea urchin eats kelp.
  - c. Fish eat smaller fish and algae (kelp).
  - d. Kelp converts sunlight to energy.
- Have one of the pair begin. One student holds the ball of string and walks over to something it would eat and wraps the string around one of the students and returns to partner. The student in the pair that did not get wrapped with string looks for something to eat and walks over and encircles its prey and returns to starting point. It is very important that only one of the students gets encircled. As the predator/prey interaction continues, it will become more difficult for the student to maneuver under the strings. Continue the predator/prey interaction until each pair has had a turn. Tell the students that each pair represents an entire population, so they can get eaten more than once.
  - After all pairs have eaten, have the students look at the food web they have just created. Remind the students that many Native American Tribes consider all things are related to each other. Ask them if they can see by the food web how everything is actually related to each other and how dependent upon each other that the organisms are.
  - Now, have the students wrap up their balls of string and start over. But this time remove all of the sea otters from the group and have all of the sea otters become algae. All that should be left standing are the sea urchin.

### 3. Homework

If time permits, or as a homework assignment, have the students draw a food web and describe the impact that a keystone species has on an ecosystem. Add this to their Sea Otter Portfolio.

## **Lesson 3: Native Americans, Science, and Salmon**

### **Lesson 3, Day 1**

#### **Suggested Strategies**

- Hopefully, a guest speaker can attend this day and talk to your class.

### **Lesson 3, Day 2 (or Day 1 if no guest speaker or video available)**

#### **Standards**

ENGLISH LANGUAGE ARTS

- EL.06.RE.05—Demonstrate listening comprehension of more complex text through class and/or small group interpretive discussions across the subject areas.
- EL.06.RE.26—Draw conclusions about reasons for actions or beliefs based on an analysis of information in the text.
- EL.06.WR.02—Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.

## GEOGRAPHY

- SS.05.GE.02.01—Use maps and charts to interpret geographic information.

### **CD Segments to Play.**

#### **Background**

A Reservation is an area of land that the U.S. government created in exchange for homelands ceded (traded) by a Treaty. A Treaty is an agreement, like a promise, that the U.S. government made with the Native American Tribes throughout the country. The reason for the Treaties was so that American citizens could build houses and create towns and States which eventually led to the United States of America. The Confederated Tribes of Grand Ronde originally had over 13.5 million acres of homelands from the south bank of the Columbia River all the way down to what is now the California/Oregon border and between the Coastal and Cascade Mountain Ranges (from peak to peak). In the 1850s, the United States forced 26 different Tribes and bands to move to the Grand Ronde Reservation; approximately 60,000 acres in size. There were several different treaties that were signed with the various tribes. The five major Tribes were the Kalapuya, Mollala, Umpqua, Chasta and Rogue River, though there were many other tribes. There really is no “Rogue River” Tribe, it is a name given to several tribes that lived around the Rogue River area. The various treaties promised different things; none of the promises were kept. When the tribes began arriving at the Grand Ronde Reservation, there were 3 different language families and 26 different dialects represented at the Reservation.

Communication was a problem, though there did exist a Chinook “trade” language that some tribal people knew and used when trading with the various tribes in the Pacific Northwest. This trade language became known as Chinook Wawa and became the one language that ended up being spoken by the people on the Grand Ronde Reservation.

Native American Tribes lived in areas of land, commonly referred to as homelands. They did not believe that they owned the lands, but that they were caretakers of the land. In addition, there were areas of land that the tribes would travel to hunt and gather their foods and medicines; these lands are referred to as usual and accustomed areas.

## **Suggested Strategies**

- In preparation for today's lesson, go to the Confederated Tribes of Grand Ronde (CTGR) website at <http://www.grandronde.org/culture/ikanum/> and print out the ceded lands map.

## **Activities**

### 1. Discuss

Ask if anyone knows what an Indian Reservation is.

Ask: Each student represents a different language, imagine that you all had to come to one area and live together. How would you talk to each other?

### 2. Mapping exercise

Pass out the map of the ceded territory. Have them add this to their Sea Otter Portfolio. Talk to the class about the original homelands.

To help the students understand the concept of homelands, use a large city park as an example. It would be helpful if you could use a park in the area that your students are familiar with. The area of the park which holds the playground equipment is the area that the children normally play in (like the Tribes who lived in their homelands). But, the children might also go to a far corner of the park to play baseball, or go to a different part of the park to have a barbeque or take a hike. These areas of the park are like the usual and accustomed lands that the Tribes would go to for hunting, fishing, etc.

Now point out the Grand Ronde Reservation, which is the very small shaded area. This is the area of land that the Tribes had to move to when they signed the Treaty which ceded their homelands of over 13.5 million acres of land.

### 3. Discuss

Ask: Why would the Tribes trade 13.5 million acres of land for a 60,000 acre Reservation?

### 4. Writing exercise

For a homework assignment, have the students write a paragraph about why they think the tribes signed these treaties.

## **Lesson 3, Day 3**

## Background

The United States wanted the lands for themselves. Many Native Americans died from fighting with the military and with the settlers. They were also starving to death because as the settlers arrived and began making homes and towns, the traditional gathering areas to get food were being destroyed and the wildlife and fish were being overhunted and their habitat (place they lived) ruined for the new houses and towns and farms. The tribal leaders were trying to make the best decisions to save their people, so while they didn't want to sign the Treaties, they had no choice but to do so.

Back in the late 1800s, if you were a Native American, it was assumed that you lived on a Reservation, and if you didn't, you were not treated very well by the new settlers. The tribal leaders and headmen of the various Tribes on the Reservation would often accept these non-treaty people as one of their own. As a result, the Confederated Tribes of Grand Ronde has a mixture of many, many tribes.

For these coastal tribal members, the sea otter was an extremely important part of their culture. Even for the non-coastal tribes, sea otter pelts were something that they traded for. Different tribes have different beliefs. For some tribes, only their headmen (like a Chief) or their medicine people (like a doctor) were able to wear sea otter. So, in addition to making beautiful and warm robes that would keep them dry from the rain, by wearing the sea otter robes, the headmen and medicine people were easily recognizable as very important people.

Sea otters were also very important as a trade item. Tribes throughout Oregon and Washington traded a lot with each other. Different tribes had different items available that other tribes didn't have. For instance, salmon was a trade item for tribes that didn't live near rivers where salmon migrated. Sea otters were traded, camas (a plant food) was traded, acorns, obsidian, etc. The list goes on and on.

Generally speaking, tribal groups lived in very distinct geographic areas, and their culture was based upon the natural resources within their own area, and their body of Traditional Ecological Knowledge was based upon their own geographic area. Imagine being forced to leave your homelands in southern Oregon to end up on the Grand Ronde Reservation. A land that had a very different climate, different plant species, different wild game and a land that was so far from their sacred areas and ceremonial sites that they could not transfer their knowledge to this new land. Many tribal people got sick and died because the climate change was so dramatic, and their Indian doctors didn't know where to find the medicines (plants) to help the sick people.

The tribes were able to survive and over time they began developing a new body of Traditional Ecological Knowledge that was based upon the Reservation and its surroundings.

In the 1950s, the United States government began “terminating” Native American Tribes. The Confederated Tribes of Grand Ronde were one of the tribes terminated. Termination meant that the federal government no longer recognized the Tribes as Indians. At termination the promises that the treaties made were no longer honored, though the homelands were not returned. In 1984, the United States government recognized the Confederated Tribes of Grand Ronde again as a tribe.

Tribes are called sovereign nations. A sovereign nation is similar to an entirely separate country. The United States of America has a constitution. Within the constitution are requirements for people to be citizens. People born in the United States are citizens, and sometimes people from other countries are allowed to become citizens. The United States makes laws that govern all of the 50 states, and within the constitution of the United States are rules that allow the 50 states to make their own laws as long as they don't conflict with the federal laws. Sovereign nations, like the Confederated Tribes of Grand Ronde also have their own Constitution. They have rules for who can be tribal members (citizens) and they have the right to make their own laws on their Reservation. Like the 50 states, the laws that the Tribes' make cannot conflict with federal laws. The Confederated Tribes of Grand Ronde have created many different offices to help them govern their tribal members and their Reservation. One of their offices is the Natural Resource Department. The people who work in this office also work with state and federal agencies in managing the natural and cultural resources off of the Reservation.

### **Suggested Strategies**

#### **Activities**

##### 1. Share

Have the class share their answers with the class. Add this to their Sea Otter Portfolio.

##### 2. Mapping exercise

Looking at the map, the ceded homelands were not coastal lands; however, there were many smaller tribes such as the Clatsop and Tillamook Tribes which though they did not sign official treaties forcing them to the Grand Ronde Reservation, they had close ties with the Reservation.

### **Lesson 4: Native Americans and Science**

#### **Standards**

## SCIENTIFIC INQUIRY

- SC.05.SI.01—Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.
- SC.05.SI.02—Design a simple scientific investigation to answer questions or test hypotheses.
- SC.05.SI.03—Collect, organize, and summarize data from investigations.
- SC.05.SI.04—Summarize, analyze, and interpret data from investigations.

## SOCIAL SCIENCE ANALYSIS

- SS.05.SA.03—Identify and study two or more points of view of an event, issue, or problem.

## ENGLISH LANGUAGE ARTS

- EL.06.WR.10—Write for different purposes and to a specific audience or person, adjusting tone and style as necessary.

## **CD Segments to Play**

### **Background**

Scientists follow certain procedures called the scientific method. This is what they do:

- Make observations.
- Ask questions and make a guess about the answer; this guess is called a hypothesis.
- Create experiments to see if their answers are correct.
- Look at what happened in their experiment and figure out how to make things better; this is called analysis.
- Tell other scientists what they found out and make recommendations on new experiments.

### **Suggested Strategies**

- In preparation for this lesson, purchase 1 or 2 large boxes (dependent upon number of students in class; you want each group of students to have at least 30) of colored goldfish crackers.

### **Activities**

1. Discuss

Ask: How many sea otters do you think are in California?

The answer is approximately 2,000 sea otters. Much of the research scientists do on sea otters is focused on the kelp forests. As we learned yesterday, without sea otters, the sea urchins often eat away the kelp forests. One of the things scientists do is take pictures from airplanes to see whether known kelp forests are growing, staying the same, or getting smaller. These aerial measurements are easy to do by taking photographs and comparing the sizes. There are also scientists who dive into the water and count all of the living organisms; this is done by video recording and then later counting all organisms in the video.

## 2. Research

### **Kelp Forest Experiment**

Show the students the box(es) of colored goldfish. Tell them to imagine the box(es) are all of the video recordings of the kelp forests in California. They need to know what kind of organisms (species) and how many of each species are in all of the kelp forest. Each group will be studying a different kelp forest. The students are going to follow the scientific model. Break the class into small groups. Each group will:

- Look (observe) the box(es).
- Guess what species (color), how many of each species and how many total species are in California (total in the box(es)). They need to write this number down.
- Dump the contents of the box(es) into one plate per group.
- Design an experiment to figure out how many of each species (color) of organisms (goldfish) are in the kelp forest (the plate). Let each group figure out the best way to do this.
- Create a tally sheet with columns/rows with the kind of species and tic marks (or other method they determine) indicating the number of each species.
- Conduct the experiment. (Count the colors)
- Analyze the results—compare their actual numbers with their guesses.
- Within each group, have them discuss alternative ways of counting the species.
- Report their findings. Have each group share their guess, their actual number and any recommendations on improving accuracy of counts and/or other things that need to be researched.

## 3. Talking Circle

End today's lesson by talking about Traditional Ecological Knowledge or the Native American scientists from long ago. Long before there were scientists

and long before there was a United States of America, the original tribes that now compose the Confederated Tribes of Grand Ronde needed to know about sea otters, where they lived, what they ate, whether their numbers were getting smaller or larger (so they would know how many to catch each year) and other information about the sea otter. This type of information is called Traditional Ecological Knowledge. The tribes lived in a very defined area of land that they were dependent upon for survival, generation after generation. Much like the Kelp Forest experiment, which was based upon today's scientific knowledge, native people:

- Made observations;
- Made guesses (hypotheses) based upon these observations;
- Through experimentation either proved or disproved the hypotheses;
- Changed methods of gathering, harvesting, hunting, fishing, etc. based upon the results of their experiments;
- Through their oral traditions reported the findings to the next generation.

Ask: What are the differences between today's scientists and the way that Native Americans practiced science in what is called today Traditional Ecological Knowledge?

#### 4. Writing exercise

If time permits, or as a homework assignment, have the students write one page about the importance of sea otters (let them choose the importance, whether it be to Native Americans, to the kelp forest or something else they think of). Add this to their Sea Otter Portfolio.

### **Lesson 5: Dangers to Sea Otter and Responsibility of People**

#### **Standards**

##### ENGLISH LANGUAGE ARTS

- EL.06.RE.05—Demonstrate listening comprehension of more complex text through class and/or small group interpretive discussions across the subject areas.
- EL.06.RE.06—Listen to, read, and understand a wide variety of informational and narrative text.
- EL.06.RE.26—Draw conclusions about reasons for actions or beliefs based on an analysis of information in the text.
- EL.06.WR.02—Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.
- EL.06.WR.10—Write for different purposes and to a specific audience or person, adjusting tone and style as necessary.

## GEOGRAPHY

- SS.05.GE.07.02—Describe how human activity can impact the environment.

### CD Segments to Play

### Background

### Suggested Strategies

- In preparation for today's lesson, print out the letters from kids at <http://www.seaotters.org/Kids/index.cfm?DocID=90>.

### Activities

#### 1. Listen

Begin the class by reading the book Baby Sea Otter. Give the class time to discuss the book. Have the class bring out their Sea Otter Portfolio.

#### 2. Discuss

There are many dangers to sea otters. Ask the students for some of the dangers; make a list on the board and have the students copy the list for the Portfolio.

- Oil spills from huge barges are lethal to sea otters and other sea life
- Commercial fishermen place nets out in the ocean and the sea otters get caught in them and die
- Loss of habitat (the place where they live) and destruction to their habitat
- Chemicals that get into the waters and end up in the ocean
- Garbage

Ask: what can we do about these things?

- When you go on a picnic or camping, always take your garbage with you.
- Never dump anything into the water.
- Save (conserve) water.
- Ask your parents if they use chemicals for gardens, and tell them how chemicals get into the waters that sea otters live in; maybe they can figure out a different way to take care of their gardens.
- After it rains really hard, look at the water that runs down the streets. All that water eventually ends up in the ocean, the sea otter's habitat...so never throw garbage out, not even gum.
- When you help you parents wash their car at home (or if they wash it alone at home), the soapy water will end up going to the ocean; ask your

- parents if they use biodegradable soaps. These are the only safe kinds of soap, and even they will end up in the ocean.
- Walk whenever you can. Every time we use our cars, we are using gasoline which is what the oil barges are carrying across the ocean: oil to convert into gasoline.

Ask: Who should do these things to help the sea otter?

### 3. Read

Pass out copies of the letters that were written to Friend of the Sea Otter.

### 4. Writing exercise

Have the students write a letter to the Elakah Alliance and send to <http://www.ecotrust.org/nativeprograms/elakha.htm>.

## **EXTENDING THE LESSON/REFERENCES**

### **Book**

Tatham, Betty and Joan Paley (Illustrator). Baby Sea Otter. ISBN-10: 0805075046 ISBN-13: 978-0805075045.