

Saving Sea Otters

Lesson Overview

In this lesson, students will become advocates for sea otters in Canada. Students will focus on three areas: Where do sea otters live? What are they like (characteristics)? How can we protect them?

Grade Level

Grades 6-8 (middle school)

Time Required

Two classes

Curriculum Connection (Province/Territory and course)

British Columbia, Grade 6

Link to the Return of the Wild Virtual Exhibition

<http://www.canadiangeographic.ca/wildlife-nature/>

Lesson Plan: Saving Sea Otters

Species: sea otter

Theme: Conservation

Additional Resources, Materials and Equipment Required

- Student Activity Worksheet
- Graph paper
- Outline map of Canada (<http://atlas.nrcan.gc.ca/site/english/maps/reference/>)
- Student access to the following websites:
 - Vancouver Aquarium YouTube Sea Otter video
<http://www.vanaqua.org/home/otters.html>
 - *Canadian Geographic* Virtual Exhibition Sea Otter Range Map
 - Canadian Geographic Kids
http://www.canadiangeographic.ca/kids/animal-facts/sea_otter.asp
 - Vancouver Aquarium AquaFacts
<http://www.vanaqua.org/education/aquafacts/seaotters.html>

Main Objective

The goal of this lesson is for students to gain an understanding of and an appreciation for sea otters. They will be able to gather facts from various sources and apply their knowledge to identify personal actions that could help save sea otters.

Learning Outcomes

By the end of the lesson, students will be able to:

- Identify the location and range of the sea otter in Canada.

- Create a bar graph that shows the global sea otter population.
- Describe sea otter characteristics.
- Identify the greatest threat to the sea otter , and personal actions that could help with sea otter conservation and protection.

The Lesson

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	Teacher Activity	Student Activity
Introduction	<p>Ask students to brainstorm species of animals found in the Pacific Northwest.</p> <p>Inform students that they will be learning about one particular species in this lesson. (Ask them to guess from the list if the sea otter was one of the animals identified in the brainstorming session.) Ask them how they feel about the sea otter</p> <p>To introduce the sea otter to the class, go to the Vancouver Aquarium sea otter YouTube page (see resources for the website). Read the introduction aloud to the students, discuss the term “rafting” and then play the video for them to watch.</p> <p>Watch the students’ reactions to the video. Ask them if they feel differently after seeing the video clip. Tell the students that they will learn more about sea otters in the following activity.</p> <p>Distribute the student activity worksheet, an outline map of Canada and a piece of graph paper to each student. Review the instructions as a class. Decide if students will work alone, in pairs or small groups.</p>	<p>Participate in brainstorming activity.</p> <p>Guess the animal selected for the lesson.</p> <p>Discuss feelings about sea otter.</p> <p>Watch the YouTube sea otter video.</p> <p>Participate in discussion.</p> <p>Listen to the instructions for the upcoming activity.</p>
Lesson Development	Monitor students and provide assistance as they work through the activity.	Complete the activity.

Conclusion	Each student will present his/her action plan to the class.	Present plan to class.

Lesson Extension

- Take students on a field trip to the Vancouver Aquarium. There is an option to book a sea otter Animal Encounter, where students go behind the scenes to learn about and feed the sea otter.
- Have a class discussion about 'cute' animals and conservation. Are we more likely to care about conserving animals that are 'cute'?
- Students could conduct research to see if there have been any negative effects from reintroducing the sea otter to British Columbia.

Assessment of Student Learning

Collect the map, graph, and completed activity. Assess for completion and accuracy.

Further Reading

National Geographic:

<http://animals.nationalgeographic.com/animals/mammals/sea-otter.html>

West Coast Sea Otter Recovery Website:

<http://oceanlink.island.net/seaotterstewardship/index.html>

Link to Canadian National Standards for Geography

Essential Element #5: Environment and Society

- Effects of human modification of the physical environment
- Environmental issues

Geographic Skill #3: Organizing geographic information

- Prepare various forms of maps as a means of organizing geographic information.
- Prepare various forms of graphs to organize and display geographic information.

Saving Sea Otters

Student Activity Worksheet



(photo courtesy of Jennifer Aung Thin)

Part A: Map and Graph

1. Look at the **Sea Otter Range Map** from the *Canadian Geographic* Return to the wild website to create your own map that shows where sea otters live in North America. Label each province and territory where sea otters can be found.

Website: www.canadiangeographic.ca/vmc

2. Use the Statistics below to create a bar graph. Make sure you include a title, labels and the total sea otter population.

Sea Otter Global Population

British Columbia 3,000

Russia 22,500

Alaska 71,500

California 2,500

Washington State 550

(source: Vancouver Aquarium AquaFacts 2003)

Part B: Sea Otter Facts

Use these websites to help you find the answers to the questions below.

Canadian Geographic Kids:

http://www.canadiangeographic.ca/kids/animal-facts/sea_otter.asp

Vancouver Aquarium AquaFacts:

<http://www.vanaqua.org/education/aquafacts/seaotters.html>

1. The average height of a sea otter is:
 - a) 2.2 metres
 - b) 5.0 metres
 - c) 1.4 metres
 - d) 0.5 metres

2. Sea otters have:
 - a) The thickest fur of any animal in the world.
 - b) The thinnest fur of any animal in the world.
 - c) The shiniest fur of any animal in the world.
 - d) The dirtiest fur of any animal in the world.

3. Sea otters prefer to stay:
 - a) On land
 - b) Near or in the Ocean
 - c) In sea caves
 - d) Underwater

4. What keeps sea otters warm in the icy waters of the Pacific Ocean?
 - a) Blubber
 - b) Thick fur
 - c) Fast swimming
 - d) They find warm tide pools

5. The sea otter's nickname is:
- a) "Cute Critter of the Sea"
 - b) "Young Man of the Sea"
 - c) "Old Man of the Sea"
 - d) "Sweet Man of the Sea"

Why? _____

6. Look at the picture below of the Anatomy of a sea otter. Choose one part of the sea otter and write down how you think it helps them live in the Pacific Ocean.

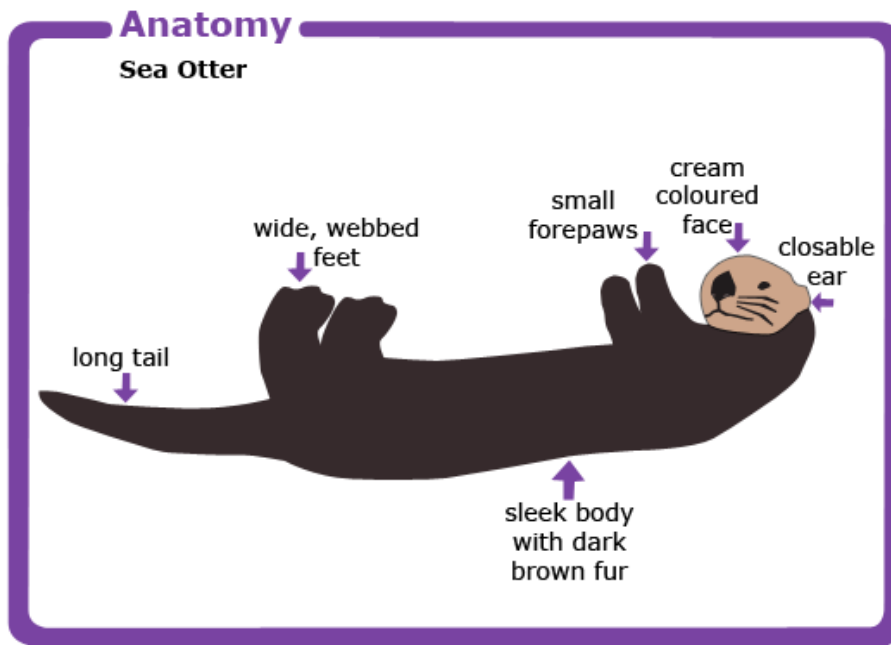


ILLUSTRATION BY SHERYL RAFUSE

7. What do sea otters eat? How much do they eat in one day?

8. "A good part of a sea otter's day is spent _____". Why?

9. What is the greatest threat to sea otters?

10. Write down what happened to sea otters in the past and what is happening now in the present. What do you think will happen in the future?

Past:

Present:

Future:

Part C: Plan of Action

You have learned a lot about sea otters.

The greatest threat to them is: _____

Why is this such a threat?

Here are some of the reasons:

- "Fur loses buoyancy and insulating capacity when covered with oil. This leads to hypothermia and pneumonia."
- "When sea otters groom and clean their oiled fur, they ingest and inhale oil. This has detrimental effects on the liver, kidneys and lungs."

(Source: Vancouver Aquarium AquaFacts)

What can we do to protect them?

Write down **3 actions** that you and your family can take that would help protect sea otters. **Explain** how you think these actions would help. You will present your ideas to the class.

Action #1:

Reason:

Action #2:

Reason:

Action #3:

Reason:
