



Wildlife Rescue

Grade Level: 8-12

Length: 90-120 Minutes (can be divided into 2 periods)

www.pwsrcac.org/lessons

By Elizabeth Towbridge

NGSS Standards

HS-ESS3-4 Evaluate or refine a technological solution that reduces the impacts of human activities on natural systems.

Crosscutting Concepts

Energy & Matter Tracking energy and matter flows into, out of, and within systems helps one understand their system's behavior.

Stability & Change For both designed and natural systems, conditions that affect stability and factors that control rates of change are critical elements to consider and understand.

Related Resources

Supporting Materials Oil in the Food Web; Wildlife and Oil; Wildlife Rescue Information; Oil Spill Overlay

Websites

- <https://www.upi.com/Archives/1990/04/17/Exxon-sea-otter-rescue-questioned/4672640324800/>
- <http://www.thedailybeast.com/newsweek/2010/06/08/should-we-clean-oiled-animals.html>
- <http://www.evostc.state.ak.us/>

Pair With Critter Clean Up Lesson

Overview

Oil spills can have a wide variety of effects on wildlife.

Objectives

- Students will identify major habitats of south coastal Alaska and their inhabitants.
- Students will identify wildlife impacted, directly and indirectly, by the oil spill.
- Students will devise clean-up and rescue procedures for impacted wildlife and habitat.

Materials

- ☐ Map of Local Area
- ☐ Oil Spill Overlay
- ☐ Large Pad of Paper
- ☐ Markers
- ☐ Articles:
 - Otter Rescue Questioned
 - Should We Clean Oiled Animals
- ☐ Worksheets:
 - Oil in the Food Web
 - Wildlife and Oil
 - Wildlife Rescue Information

Notes

Background

Oil spills can have devastating effects on wildlife and ecosystems as well as people. There is much debate about whether it is cost effective and humane to clean and rehabilitate individual animals after an oil spill. Other options include leaving animals to fend for themselves in their natural habitat.

Preparation

Visit <https://www.upi.com/Archives/1990/04/17/Exxon-sea-otter-rescue-questioned/4672640324800/> and <http://www.thedailybeast.com/newsweek/2010/06/08/should-we-clean-oiled-animals.html> to print out copies of “Otter Rescue Questioned” and “Should We Clean Oiled Animal?” Visit <http://www.evostc.state.ak.us/> to learn about species of wildlife affected by the Exxon Valdez Oil Spill and to print out or write down the list of injured animals. Print out worksheets as well.

Introducing the Lesson

Review field guides about the local area and, as a class, identify the major habitats found in the region.

Activity

1. On map provided, have each student place at least three species of wildlife in each habitat. This can be done by either drawing the wildlife or cutting and pasting from the wildlife worksheets. This can also be done as a class activity by making the map into a mural or bulletin board. Have each student place at least one species on the map. After the maps are completed ask the students how they think these species relate to each other. Try to identify obvious food webs.
2. Hand out the “Wildlife and Oil” worksheet. Using oil spill overlays from each day/week of the *Exxon Valdez* oil spill (or another spill relevant to your area), trace the development of the oil spill on the map. After each day/week observe how much area the spill is covering and the wildlife the oil has covered. Use a large pad of paper to trace the oil spill’s movement and impact on wildlife. Discuss why these animals have been impacted and what characteristics they have that may have caused them to live or die because of the oil. What animals feed upon them and what animals

- do they feed upon? (Predator/prey relationships). Then complete the “Oil in the Food Web” worksheet and discuss results as a class.
3. Do the “Wildlife and Oil” worksheet. This activity will demonstrate the properties of oil in the water and on wildlife. If you have them, use results from the Critter Clean-Up experiments to analyze wildlife rescue techniques.
 4. Ask students, what would you do? Have the class brainstorm ideas for clean-up and rescue of habitat and wildlife. Pass out “Otter Rescue Questioned” and “Should We Clean Oiled Animals?” for students to read. Instruct them to annotate the articles, highlighting at least three main points, identifying at least two things they disagree with, and writing at least one question they still have.
 5. Divide the class into small groups. Each group should pick and evaluate one idea or method for rescue, protection and clean-up of habitat and wildlife. Use the “Wildlife Rescue Information” worksheet provided as an outline for considerations that must be taken into account (cost, logistics, weather, human impact, stress, etc.). Have each group present their response plan.
 6. Lead a group discussion on the following prompts. Support students in making arguments based on evidence, including their own personal experiences and observations of the environment as well as additional science ideas.
 - What do they think is the best approach to use for wildlife rescue (or habitat clean-up)?
 - How might weather, geography, tides and currents affect the use of these technologies/methods?
 - How might the biology of the animal or their relationships with other animals make these technologies/methods more or less effective?
 - How might human relationships with these animals make these technologies/methods more or less effective?
 - What are the trade-offs in using this approach?
 - How could this approach be refined or improved?

Wrap-up

Have students do a fast write in their journals about their impressions of the clean-up, protection and rescue process. What were their frustrations in coming up with a solution? What are their feelings about the animals and ecosystems they were working with?

Assessment

Review written work for complete answers to questions and effective annotation. Evaluate student collaboration, cooperation, and consideration of their peers' ideas during the discussion. Listen during discussion and assess their presentations for arguments based on evidence from their own life and other science ideas. Students who successfully meet the performance expectation will evaluate and refine a technological solution for wildlife rescue/habitat clean-up that reduces the impacts of human activities on natural systems.

Pair With

- Critter Clean Up Lesson Plan