

Lesson 22

Water Spills

What happens to wildlife during oil spills?
What happens to water if oil spills?
How is it cleaned?

GOAL To understand that oil can pollute the waterways and can harm the wildlife.

OBJECTIVES Students will:

- ✓ examine feathers under a magnifying lenses
- ✓ simulate an oil spill into a waterway
- ✓ determine how to clean water
- ✓ examine the effects of oil spills on waterways

MATERIALS 5 gallon plastic container, several feathers, a cup of vegetable oil, magnifying lenses, detergent, paper towels

CORE CURRICULUM CONTENT STANDARDS

- Language Arts 1(1)
- Science 1(1,2,3,7), 8(2-8), 11(6), 14(5,7)

VOCABULARY oil, oil spills, tanker, magnifying lenses

PROCEDURES

1. Have students simulate an oil spill and observe its affect on wildlife, particularly birds.
2. Fill up plastic container with water. Break up students and distribute a feather. Have students observe it dry and examine it under magnifying lenses. Have them place the feather under water and observe any changes. Again, examine under lenses.
3. Tell the students that there was an oil spill in the river. Have students pour a cup of vegetable oil into waterway. Part of the oil spills on feather. Now, have them examine feather with oil spill. Note the changes in texture. Ask how they think a bird would be affected if oil were spilled on them. Would the bird be able to move, fly, or breathe?
4. Provide students with dish detergent, paper towels. Ask them to clean up feather. How difficult or easy was this?
5. Instruct students to imagine a large area of oil spilled into a waterway. What would be the affect on the water, wildlife?

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6. Ask students how they would feel if they saw a bird covered in oil and it could not move. Have them write their feelings on a piece of paper.
7. Have students place petroleum jelly on a piece of paper. Place paper outside of window with either window or rock holding it down. Observe paper after several days (paper will have pollution on it).
8. Discuss different types of pollution and its effect on society (polluted air can cause problems with breathing; polluted water can make people or animals sick, etc.) Are there any health related problems associated with pollution?

EXTENSIONS

1. Have students research how oil spills from tankers are contained in an area and cleaned.
2. Ask how wildlife is cleaned.
3. Since oil tankers can not navigate on Farmington River, have students think other possible sources of oil pollution (oil from storm drains, oil truck , underground oil tanks).
4. Ask where oil come from. Is it a renewable or non-renewable resource?

RESOURCES

Haskin, Kathleen, *The Ways of the Watersheds, An Educators Guide to the Environmental and Cultural Dynamics of New York City's Water Supplies*, 1995, The Frost valley YMCA, Claryville, NY.

GLOSSARY

magnifying lenses - tools used to increase the size of an item

oil - any of numerous mineral, vegetable, and synthetic substances and animal and vegetable fats that are generally slippery and combustible, but not soluble in water, and used in a great variety of products, especially lubricants and fuels

oil spills - accidental spills from tanks that can pose serious threats to the environment

tanker - a ship, plane, or truck constructed to transport liquids, such as oil, in bulk