

Nonpoint Source Pollution

Grade Level: Grades 4-8

Objectives:

- To have students understand the concept of nonpoint source pollution.
- To have students be able to list categories of nonpoint source pollution and examples of each category.
- To have students realize that we are all responsible for nonpoint source pollution.
- To have students understand ways in which human changes to a habitat affect organisms.
- To have students learn ways that they can help prevent nonpoint source pollution.

Strategy:

Use this activity as an introduction to **nonpoint source pollution**.

Materials:

- **10 paper lunch bags**, each containing one of the following:
- empty motor oil container
- plastic baggie
- toilet paper tube
- six pack ring
- toy car
- small toy cow or pig
- picture of manicured lawn with flowers
- small jar of dirt
- empty container of garden pesticide
- crumpled piece of paper

BACKGROUND

Nonpoint source pollution is defined as pollution in a watershed whose entry is difficult to locate. You can't point to its source. Rainwater or melting snow runs over lawns, parking lots, farm fields, city streets and forests picking up and carrying pollution into rivers and oceans.

Nonpoint source pollution comes from a variety of sources and accounts for 99 percent of all sediment, 88 percent of all nitrates and 84 percent of all phosphates that are going into the nation's rivers, lakes and streams.

Who is responsible for nonpoint source pollution? We all are!

In coastal areas, several major categories of activities are responsible for most of the nonpoint source pollution. Agriculture contributes from crops and livestock. Forestry contributes from timber harvesting. Urban area contributions are from cities, roads, cars and residential areas. Marina contributions come from boat storage and service.

Pollutants from these activities include sediment, nutrients and chemicals. Nonpoint source pollution causes health and environmental threats to humans.

PROCEDURE

1. Divide students in groups of three or four.
2. Give a paper bag to each group. Have the group come up with three words or phrases to describe the type of nonpoint pollution in their bag without using the actual word (e.g. long-lasting, strong, unbreakable instead of the word plastic).
3. Go around the room. Have each group describe the pollution in their bag for the class using their three words or phrases. Then have the rest of class guess what they've described.
4. Have students brainstorm suggestions to prevent each type of pollution.

RESOURCES

Alaska Oil Spill Curriculum. 1990. Prince William Sound Science Center, Cordova, AK.

Beneath the Shell: Nonpoint Source Pollution. 1992. New Jersey Department of Environmental Protection, Trenton, NJ.

Ranger Rick's NatureScope: Pollution—Problems & Solutions. 1990. National Wildlife Federation, Washington, DC.

Ripples. 1990. UNC Sea Grant, Raleigh, NC.

Sound Ideas. 1992. NC Estuarine Research Reserve, Raleigh, NC.

Splish Splash. 1992. UNC Sea Grant, Raleigh, NC.

Turning the Tide on Trash. 1992. US Environmental Protection Agency, Washington, DC.

EXTENSIONS

- 1.** Research and report on federal, state and local laws that affect nonpoint source pollution.
- 2.** Collect newspaper articles about local pollution problems. Discuss whether the pollution is a point or nonpoint source. Discuss ways that the problems in the articles could be prevented.
- 3.** Write a letter to state and local officials letting them know how the class feels about nonpoint source pollution in your area.
- 4.** Research ways that human alterations of the environment affect different organisms in different ways. Look around your schoolyard and around your neighborhood; find examples.

Source: North Carolina Aquariums, North Carolina Department of Environment and Natural Resources.

