Don’t Point at Me!

Grade Level: 4-8

Time: two or three 90 minute classes

Concept: Understand the two major categories of pollution

Generalization: Students will understand the difference between point source and nonpoint source pollution.

Objectives: Students will:
1. define and describe two major categories of pollution: point source and nonpoint source.
2. identify ways to minimize nonpoint source pollution.

Materials:
Magazine photographs
newspaper articles
slides or other pictures of water pollution
worksheet of point and nonpoint sources of pollution (in blackline masters section)
EnviroScape Kit (maybe borrowed or purchased)

Procedure:
Initiating Activity:
1. Do RoundRobin discussion (students take turns talking with their teammates).
2. Teacher will chart student ideas on what causes pollution. What is the cause of pollution in their neighborhood, streams, aquifer, watershed, lakes or rivers?

Strategies:
1. Explain point source and nonpoint source pollution.

Vocabulary:
Point source pollution has a well-defined location, such as the pipe through which factory discharge enters a stream.
Nonpoint source pollution has its source over large areas such as farms, grazing lands, logging roads, construction sites, etc.
2. Reinforce vocabulary using point and nonpoint sources of water pollution worksheet.
3. Review chart.
4. Place students in groups of four.
5. Students will make a T-chart labeled Point Source and Nonpoint Source.
6. Students will decide as a group under which column to place the brainstormed information.
7. Reinforce the vocabulary by having students read newspaper articles, magazines, and picture books to locate and record point source and nonpoint source pollutants.
8. Students will review their sources of pollution and decide ways that their community can minimize this problem.

Reinforcement:
Use the EnviroScape Kit as a hands on reinforcement of the student’s understanding for point source and nonpoint source pollutants.
Culminating Activity:

1. Students will write to their local newspapers, city hall or county commissioners about their pollution concerns.
2. Students will invite local officials to a class interview session on pollution concerns. This can be taped for a school wide viewing.
3. Students can design posters depicting pollution vs. non pollution living styles.
4. Brochures on ways to clean up polluted areas in their community can be made and distributed.

Evaluation: Teacher observation, students charts, product assessment

National Geography Standards:
Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a special perspective.
Standard 2: How to use mental maps to organize information about people, places, and environments in a spatial context.
Standard 12: The process, patterns, and functions of human settlement.
Standard 14: How human actions modify the physical environment.
Standard 18: How to apply geography to interpret the present and plan for the future.

Sunshine State Standards:
SS.B.1.3.1: the student uses various map forms and other geographic representations.
SS.B.2.3.6: the student understands the environmental consequences of people changing the physical environment in various world locations.
SS.B. 2.4.5: the student knows how social, cultural, economic and environmental factors contribute to the dynamics nature of regions.
LA.A.1.3.1: the student uses the reading process effectively.
LA.A.2.3.6: uses a variety of reference materials, including indexes, magazines, newspapers, and journals; and tools, including card catalogs and computer catalogs, to gather information for research topics.
LA.B.2.3.1: the student writes to communicate ideas and information effectively.
SC.D.2.3.2: knows the positive and negative consequences of human action on the Earth’s systems.

Resource:
Enviroscapes Kit is available on loan through:
1. Water Management Districts Educational Programs
2. Florida Geographic Alliance

Maybe purchased through EnviroScapes Headquarters:
14524-F Lee Road
Chantily, Va. 20151
www.enviroscape.com
Websites:
http://www.dogpile.com
http://www.askjeeves.com
good geography and science search sites

US Geological Survey
http://www.usgs.gov
great posters, information on maps, water monitoring stations data

Florida Department of Environmental Protection (DEP)
Bureau of Aquatic Plant Management
3917 Commonwealth Blvd. MS# 710
Tallahassee, Fl. 32399-3000
http://www.dep.state.fl.us
current environmental issues, park information, water data

Florida Institute of Phosphate Research
1855 W. Main St.
Bartow, Fl.33830
Telephone: 863-534-7160
http://www.fipr.state.fl.us
excellent educational outreach program, information on all phosphate companies, free materials, speakers, lesson plans available