

What Pollutes Groundwater?

Skill: Science

Objectives

Students will:

Become aware of the numerous ways that human activities contribute to water pollution. The aim is to have them realize that they as individuals can curb the amount of pollution that occurs.

Procedure

- As a class or in groups, have the students identify human activities that contribute to water pollution. Have students use the accompanying Student Activity Page. Urge them to think of things that they personally do along with ones that they have observed. Answers to the questions will vary. It should give you a good idea of the students' awareness and perceptions of water pollution.
- Once you have identified several activities, list the ways that they each may contribute to water pollution. Here are some examples:

Getting rid of garbage in a landfill - Rain water may carry pollutants through the soil and into the groundwater. This is especially true in old landfills that were started before stricter controls. Also, there are many illegal dumps where contaminants may easily get into the groundwater.

Clearing land for building - This increases the chance for erosion. New lawns are often treated with fertilizer and herbicides that may contaminate the groundwater.

Driving a car or truck - Substances added to the air by car exhaust can combine with air to make acid rain. Other substances such as leaking oil from cars on parking lots wash into and pollute streams.

Dumping household products - Paints, oils, and bathroom cleaners that are poured down the drain may contaminate the water supply. Containers that aren't disposed of properly can also pollute.

Building highways - Clearing an area increases the chance of erosion, polluting nearby streams. Salts and other substances added to roads wash into streams.

Producing food - Fertilizers, herbicides, and pesticides (chemicals) applied to cropland may enter the water supply. Cleared land again increases erosion. Animal wastes that are not applied or spread properly may wash off the fields and enter streams and rivers.

- Discuss each activity with the class. Have students present their depictions of water polluting activities.
- Prepare a bulletin board showing how these activities affect water quality. Leave space to identify ways to reduce the pollution from each.

Used with permission from *Wildlife and Environmental Education: Issues and Actions*, Instructional Materials Service, Daryle E. Foster, Director, Cornell University.

Vocabulary

- contribute
- observe
- landfill
- fertilizer
- herbicide
- contaminate
- substance

Materials

- A student Activity Page for each student

P.A.S.S.

4th Grade

- Visual 3.0
- Process 5.4
- Life 3.1

5th Grade

- Visual 3.0
- Process 5.4
- Life 2.2

6th Grade

- Visual 3.0
- Process 5.4
- Life 4.1
- Earth 5.2

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Student Activity Page

Name _____

Date _____

Instructions: Answer each question below. Then draw the picture on the back of this sheet or another piece of paper.

Questions:

1. How many things can you think of that can pollute water?

2. What are they?

3. Pick one of these activities. The activity is:

4. Do we need to do this activity? Why?

5. Draw a picture of this activity. Show how it can cause water pollution.

