



What if Water Cost as Much as Gasoline?

Learning Objectives: Students will: (1) explain how the availability of a resource has an effect on how much people are willing to pay for a resource, (2) describe how cost influences the willingness of people to conserve natural resources and (3) discuss ways to encourage people to conserve natural resources.

Subjects: Environmental Education, Science and Social Studies

WMASs: EE: B.8.16, C.8.3

SC: E.8.6

SS: A.8.11, D.8.2, D.8.11

Grades: 6–9

Materials:

- ❖ What if Water Cost as Much as Gasoline? activity sheet
- ❖ play money
- ❖ legal size envelope for each student

Background: At one time energy—gasoline and fuel oil—was so inexpensive that people did little to conserve it. People drove as much as they wanted, energy-efficient cars were less of a concern and homes were built with very little insulation. Today water is relatively inexpensive. Few people try to conserve water just as few people conserved gasoline or fuel oil when they were less expensive. This activity is designed to help students begin thinking about the value of water.

Procedure:

1. Interview a grandparent or older neighbor. Ask about the present and past price of gasoline, fuel oil and water. Ask also about conservation of these resources. Questions should include:
 - ❖ What is the lowest price you remember paying for gasoline? Did you conserve gasoline then?
 - ❖ What price do you pay for gasoline today? Do you try to conserve it now? If so, how?
 - ❖ When you began driving, what would your response have been if someone had told you that the

price of gas would reach more than \$3.00/gallon?

- ❖ Do you remember when it was less expensive to heat your home? Did you conserve energy then? How?
- ❖ How much does it cost to heat your home in the winter today? Do you try to conserve energy now? How?
- ❖ How much water do you use in your home in a year? Do you try to conserve water? Why? How?
- ❖ Do you work harder to conserve energy or water? Why?

2. Discuss your findings.

3. Ask students to imagine they are taking a trip into the future over a specified weekend. Water costs the same as the current price of gasoline (record current price on activity sheet master before photocopying or write a whole dollar amount on sheet to make calculations easier). They will have to purchase all the water they use in a weekend by placing “money” in an envelope. (Make a master sheet of play money and make copies to distribute to the students.)

Since some people have more money than others do, some students should be given more money than others. Randomly give students \$30, \$40, \$50. Students should also be given the “Sale on Water” activity sheet to record the water they use. Remind them to estimate the amount of water used on their behalf when a parent does laundry or prepares a meal (e.g. wash 4 loads of laundry, 4 people in family, assume that the water for one load was used on the behalf on the student).

Each time water is used, calculate the cost and deposit money in the envelope.

4. Discuss your results.

- ❖ Who used the least water? Who used the most? What accounted for the difference?

- ❖ Was it easy to live within your water budget?
- ❖ Did you have to conserve water? Why? How did you try to conserve water?
- ❖ Should people try to conserve water? Why or why not?
- ❖ Should water cost so much that some people are forced to conserve it more than others?
- ❖ Making a natural resource expensive is one way to encourage people to conserve. What are other ways to encourage people to conserve natural resources?



Examples:

Education programs—try to teach people to conserve the resource

Rationing programs—set strict limits on water use

Tax credits and deductions—Provide economic incentives to conserve the resource

- ❖ Which methods to encourage conservation do you think would be most effective? Which are the most fair?
- ❖ Should people conserve water even if it's inexpensive? If so, why?

Going Beyond:

As a class, investigate how a public works department in a dry western/southwestern city (e.g. Tucson, Santa Fe, Denver, Los Angeles or Las Vegas) charges residents for water. Do they encourage conservation? If so, how?

Adapted from: *Local Watershed Problem Studies*, 1981, Cooperative Educational Service Agency 16, Waukesha, and the Water Resources Institute, 1975 Willow Drive, University of Wisconsin, Madison (out of print).