

Environmental Studies Program  
Science Enrichment and Extensions



## WATER

### 1. Pond Water Investigation

Collect three or four samples of water from a community pond, lake, marsh, and/or stream. Examine the water using a magnifying glass or microscope. Make drawings of what you see. Identify, as far as possible, the living and non-living things you find. Test the PH of your samples. Compare the samples and draw conclusions about the health and purity of the water. Indicate the dependence of the environment on the water in the surrounding areas.

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Take samples from varying depths of a pond. Use the same methods as above. Comment on the turbidity of the water and the effect it has on the life in the pond.

### 2. Where Does Water Come From?

Report on what happens to water before it reaches your home and after it leaves your faucet. Make a graphic presentation of the water's adventure from its source to where it re-enters the Mississippi. If possible, visit a water treatment plant. Interview someone at the plant who can explain the specific kinds of water treatment needed to bring pure water to District #622 homes.

### 3. Acid Rain

Demonstrate the seriousness of the acid rain problem. Create an experiment using three or four plants. Water each plant with a different kind of water: pure water, slightly acidic water, and water with higher concentration of acid. Take photographs or make diagrams of the plants at different stages of this experiment.

Make predictions about the future if acid rain is not stopped. Recommend action that will change things, such as writing to the Legislature, the President, etc.

Another way to demonstrate the destructiveness of acid rain is to use a piece of chalk to represent a monument. Show what acid rain does to famous buildings and statues.

#### 4. Dirty Water

Test a variety of ways to remove contaminants from water. Show how different kinds of soil and rock affect the ground water. Use plastic liter bottles to make filtering systems. (see illustration.) How do different soils affect the PH, etc?

#### 5. Water Cycle

Make a huge diagram of the water cycle. Indicate ways that water can become polluted at every phase of the cycle. Chart ways to protect water.

#### 6. Rain Forest

The rain forest affects our water supply. Can you think of a way to collect data, make observations and arrive at conclusions that will develop a consciousness of this problem? Can you take any action to save the rain forest?

#### 7. Water Conservation ("SAVES")

What water saving devices are available? How do they work? How effective are they? Can you invent another water saving device? Let your creativity

develop this project.

#### 8. Water Use/Consumption

Determine the amount of water you use in your home. Find ways you can reduce the amounts you use. Use charts to show the difference in the amounts of water used in your home before and after your conservation methods. Multiply the amounts by 100 or 1000 to show how a neighborhood community could make a difference.

Reading the water meter at specific times might be one way to approach this project. You could collect the water from a dripping faucet, or measure the water used while brushing your teeth. You could compare the amount of water used bathing verses showering etc.

Conduct a study of your city's water usage over the last ten years. Interview a person in the public works department at your City Hall who can help you to obtain this data. Make a prediction based on this data projecting the use of water in your city in 2002. Find out what ways the city is promoting water conservation and planning for the future.

#### 9. Create Your Own

Feel free to create your own project. Help us protect and save our water.