



COMMUNITY WATER CYCLE SURVEILLANCE

Objectives:

The student will be able to:

- ◆ Demonstrate the cycle of water through a community; and
- ◆ Become aware of the uses of water in their community.

Suggested Grade

Level:

6-8

Subjects:

Science, Social Studies, Art

Time:

Approximately 120 minutes

Materials:

- bulletin board
- butcher paper or art pad
- milk cartons (pints, quarts)
- small boxes
- markers
- scissors
- pictures cut from magazines
- construction paper
- masking tape, push pins, or thumb tacks
- poster board
- crayons
- acetate sheet
- overhead projector (as needed)
- teacher sheets (included)

BACKGROUND INFORMATION

You may be surprised to know that you use the same water over and over again. The water you swam in last week may be the water you will drink today. The water that comes from the lake where you swim may be pumped to your local drinking water treatment plant. Here, the water is treated (cleaned) and then it goes to your home where you will drink it, take a bath in it, or maybe water your plants. After you use this water, it goes down the drain and travels to a wastewater treatment plant, where it is cleaned and put out into a lake or river.

Think of your water as if it is taking a journey. The next time you turn on your faucet you will have an idea of how far your water has come and where it is going. This is similar in concept to the natural hydrologic, or water, cycle in which water “travels” through various states of matter and parts of the natural environment. A community water cycle might be thought of as the human world’s version of the natural water cycle.

TERMS

conserve: to use a resource wisely and efficiently.

cycle: a process that repeats itself.

resource: a supply of a valuable and useful thing.

ADVANCE PREPARATION

A. Gather materials for bulletin board (butcher paper to cover bulletin board, construction paper, markers, milk cartons for buildings, and pictures). If you are going to make the “3-D” bulletin board illustrated, gather small boxes (such as gift boxes, small food boxes [e.g., cereal, cookies, etc.], and small milk cartons) and cut off the bottom of each one (so you can reach into it to mount it with a thumb tack).

B. Make a transparency of the “Community Water Cycle” teacher sheet.

PROCEDURE

I. Setting the stage

A. Ask the students the following questions.

1. What is a community? (*A group of people living together in a designed area.*) Remind them that an important part of any community is the services and utilities that provide the things people need.
2. What is a cycle? (*A complete process that repeats itself; the seasons of the year are a good example.*)
3. Can you describe a community water cycle? (*A water distribution process that repeats itself through a community.*) Show the students a transparency of the “Community Water Cycle” teacher sheet.


B. How could we illustrate a community water cycle? Lead the students into developing a bulletin board.

II. Activity

A. Develop a bulletin board that represents a community water cycle. See the teacher sheet, “Community Water Cycle Bulletin Board,” for a suggested diagram of a bulletin board. Introduce the students to how a water utility serves the community (keeping a supply of safe drinking water, making sure water is safe from diseases, treating wastewater so it may safely be discharged).

B. Divide the students into teams

1. Instruct one team to cover the bulletin board with butcher paper and draw or cut a “stream” from construction paper; this represents the source of water. Title the board “Water Journey”.
2. Have the other teams draw buildings and cut them out, or use magazine pictures, or small milk cartons and boxes decorated as buildings to represent the homes, schools, businesses and other buildings that would be present in a community.
3. Have the students place these “buildings” on the board to represent the distribution and use of water in a community. (Mount them with thumbtacks or push pins. You could staple them or try rolled pieces of masking tape to mount the cartons.)



C. Together with all of the students, construct or draw buildings to represent the drinking water treatment facility and the wastewater treatment plant to show that water is treated (cleaned) before it is used and again after it is used, then returned to the stream.

D. Document your bulletin board by taking photos of the finished product.

III. Extensions

A. Investigate the distribution of water in your community during a historical period of time. Create another bulletin board for that period of time, calling it “Water Journey Then.”

B. Research the many steps of the water cycle in nature. Compare it to the path of water in the community model pointing out where it is similar and where it is different.

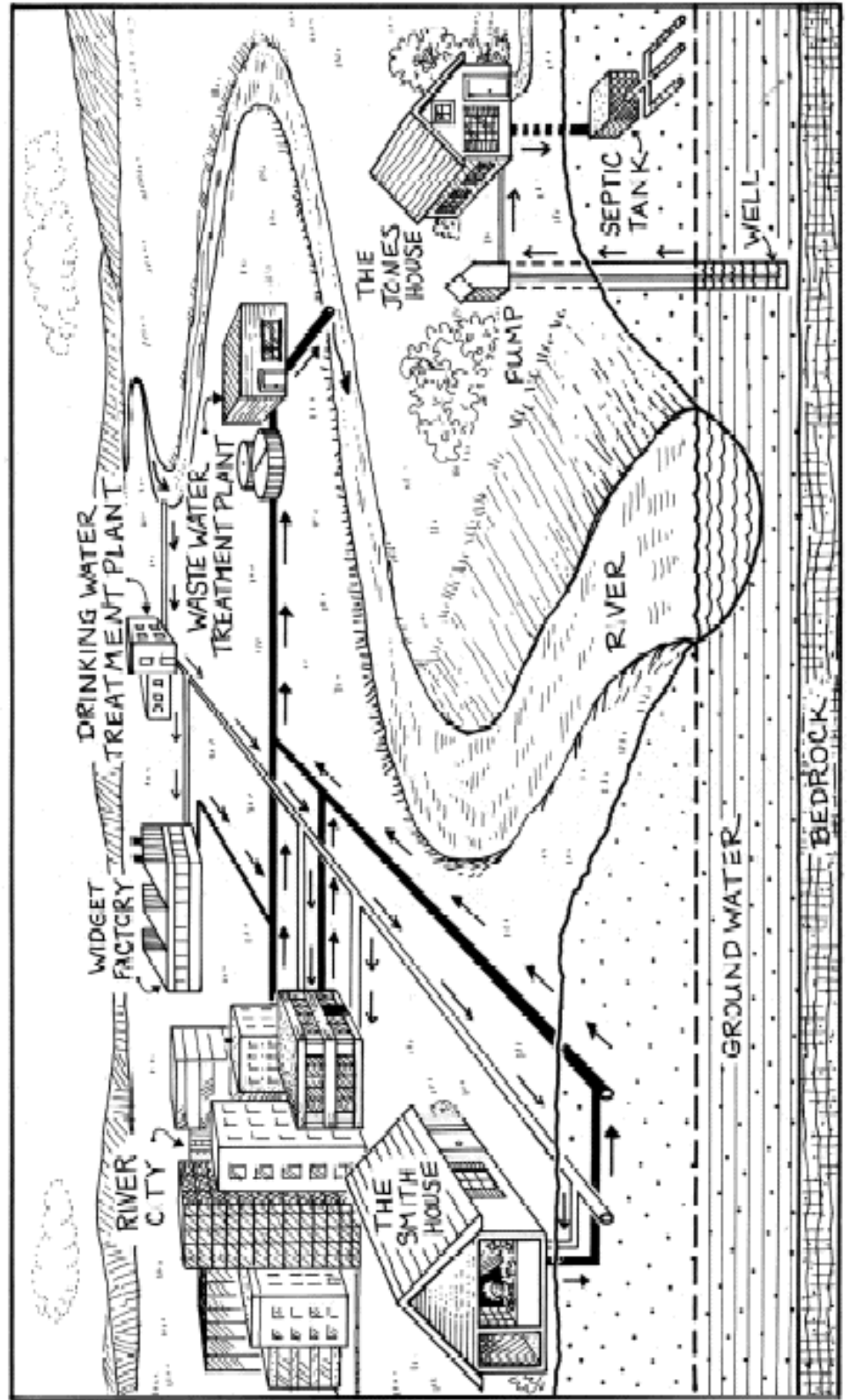
R E S O U R C E S

“The Story of Drinking Water” (student booklet), American Water Works Association, Denver, Colorado, 1984.

Thank you to the Environmental Protection Agency *Water Sourcebook* for this activity!

http://water.epa.gov/learn/kids/drinkingwater/wsb_index.cfm

COMMUNITY WATER CYCLE



COMMUNITY WATER CYCLE BULLETIN BOARD

