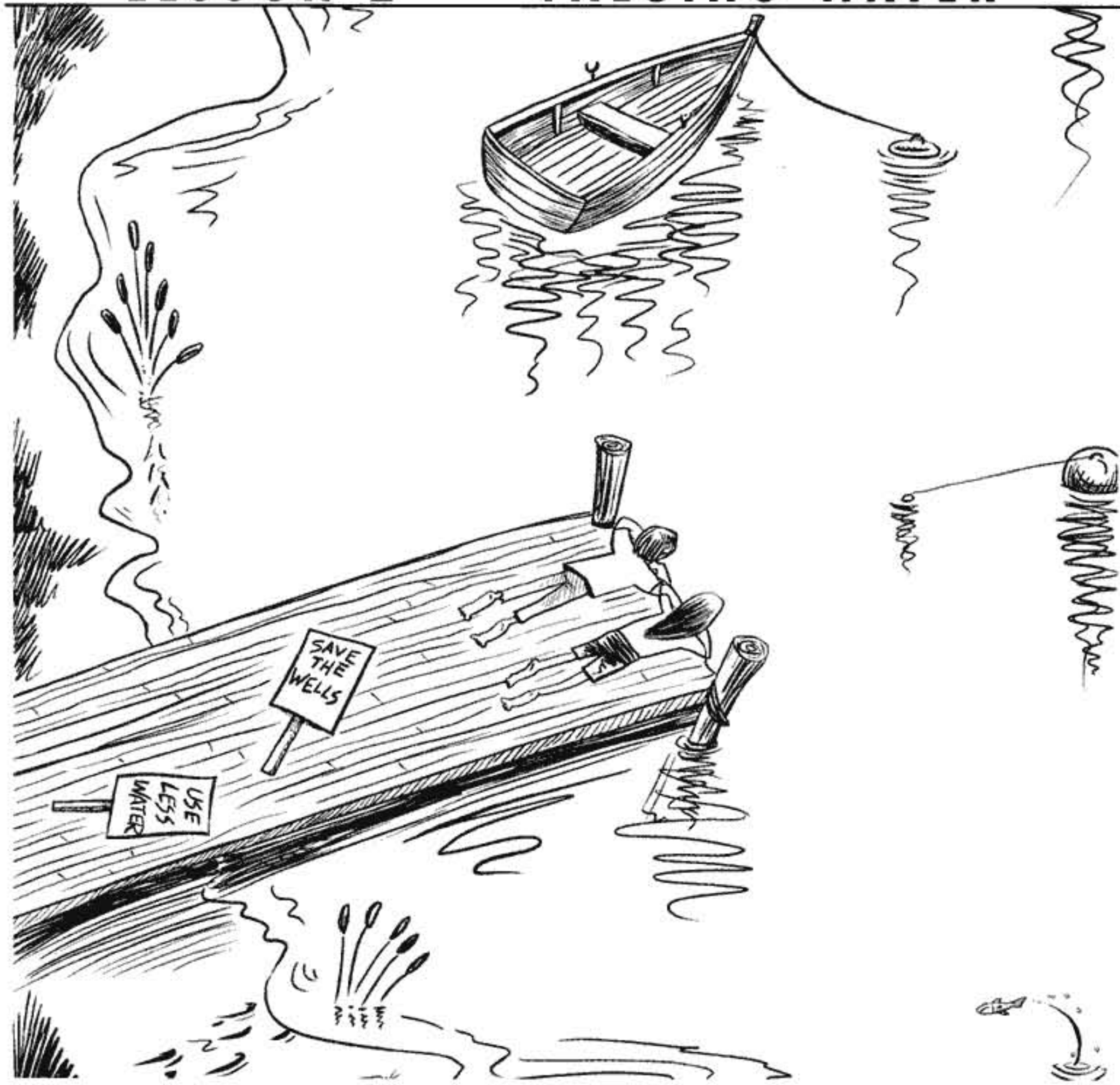


# LESSON 2 VALUING WATER



## **LESSON 2 VALUING WATER**

Students will explore several meanings of the word "value" as it applies to water. First, they will learn how monetary value is applied to a family's water service by examining a typical water bill. By designing a conservation slogan and bumper sticker, students express water's value to the community. The final activity, the water interview, brings reality to an experience few Americans ever have: daily life without plentiful running water. All these activities raise students' awareness of the importance of drinking water supply, the "silent service."

## LESSON 2 VALUING WATER



### ACTIVITY 2-1 WATER RATES

#### SUMMARY

Students will use a sample water bill to answer questions about water use and water rates.

#### CONTENT AREAS

math, reading

#### GOAL

to understand how water bills are determined

#### TIME

one session

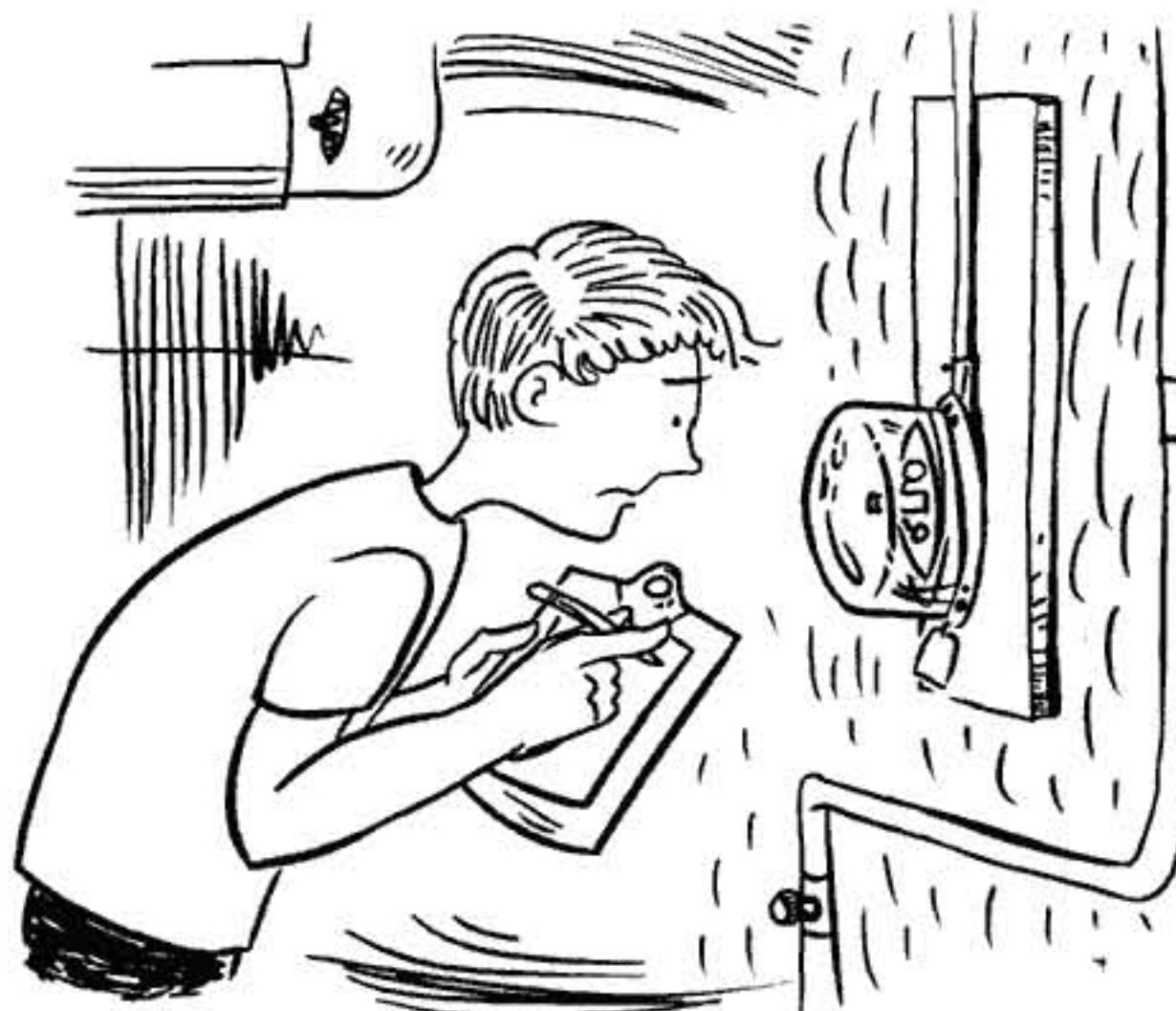
#### ADVANCE PREPARATION

- Copy student pages.

#### TEACHER PROCEDURE

1. Students will use the following water bill for a family of four to answer the questions.

WATER BILL	
Period: January - June (water bill only-does not include sewer charge)	
Meter Readings	
Present	<u>54,500</u>
Previous	<u>48,000</u>
Total cubic feet used	<u>6500</u>
1 cubic foot = 7.48 gallons	
<b>Cost</b>	
100 cubic feet =	\$1.90
Total cost to customer =	_____





**ANSWERS TO STUDENT QUESTIONS**

1. What was the total cost of the water to this family for six months?  
\$123.50
2. How many gallons of water did this family use during the six months?  
48,620 gallons
3. How many gallons of water per day did they use?  
267 gallons per day
4. How many gallons did each person use per day?  
66.75 gallons per person
5. What is the cost per gallon of the water they used?  
\$.0025/gallon
6. What would this family's cost for water be for one month?  
\$20.58
7. What would this family's cost for water be for one year?  
\$247.00
8. What would this family's water bill be if each person used 10 gallons per day less?  
\$105.20





ACTIVITY 2-1 WATER RATES

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**WATER BILL**

Use the water bill for a family of four to answer the following questions. Show all of your work and remember to include units.

<b>WATER BILL</b>	
Period: January - June (water bill only-does not include sewer charge)	
Meter Readings	
Present	<u>54,500</u>
Previous	<u>48,000</u>
Total cubic feet used	<u>6500</u>
1 cubic foot = 7.48 gallons	
<b>Cost</b>	
100 cubic feet =	\$1.90
Total cost to customer =	_____

1. What was the total cost of the water to this family for six months?
  
2. How many gallons of water did this family use during the six months?
  
3. How many gallons of water per day did they use?



4. How many gallons did each person use per day?
  
5. What is the cost per gallon of the water they used?
  
6. What would this family's cost for water be for one month?
  
7. What would this family's cost for water be for one year?
  
8. What would this family's water bill be if each person used 10 gallons per day less?



## LESSON 2 VALUING WATER



### ACTIVITY 2-2 WATER BUMPER STICKER

#### SUMMARY

Students will create bumper stickers that encourage water conservation.

#### CONTENT AREAS

social studies, language arts, art

#### GOAL

to apply knowledge of water conservation

#### TIME

two sessions

#### MATERIALS

- bumper sticker outline for each student
- one piece of paper (approximately 4" x 12") for each student (you may be able to get pieces with adhesive on the back)
- markers, crayons, and/or colored pencils
- optional: bumper stickers to show students

#### ADVANCE PREPARATION

- Cut paper to correct size.
- Copy "bumper sticker outline" for each student.



#### TEACHER PROCEDURE

1. Explain to students that they are going to create their own bumper stickers. The bumper sticker's message should encourage people to conserve water. Explain that different messages and styles will appeal to different groups. For example, a bumper sticker for young children will look different than one for people who work in restaurants. Explain to students that they will need to choose an "audience" for their message.
2. Discuss with the class the qualities that make a good bumper sticker. (Clear message, neatness, easy to read, catches the eye)
3. Give each student a **Bumper Sticker Outline** to prepare her/his ideas for the bumper sticker.
4. Each student should complete the outline and show it to you. Each student will then create a bumper sticker rough draft and get your approval.
5. Once you have approved a student's plan, s/he may create her/his bumper sticker.

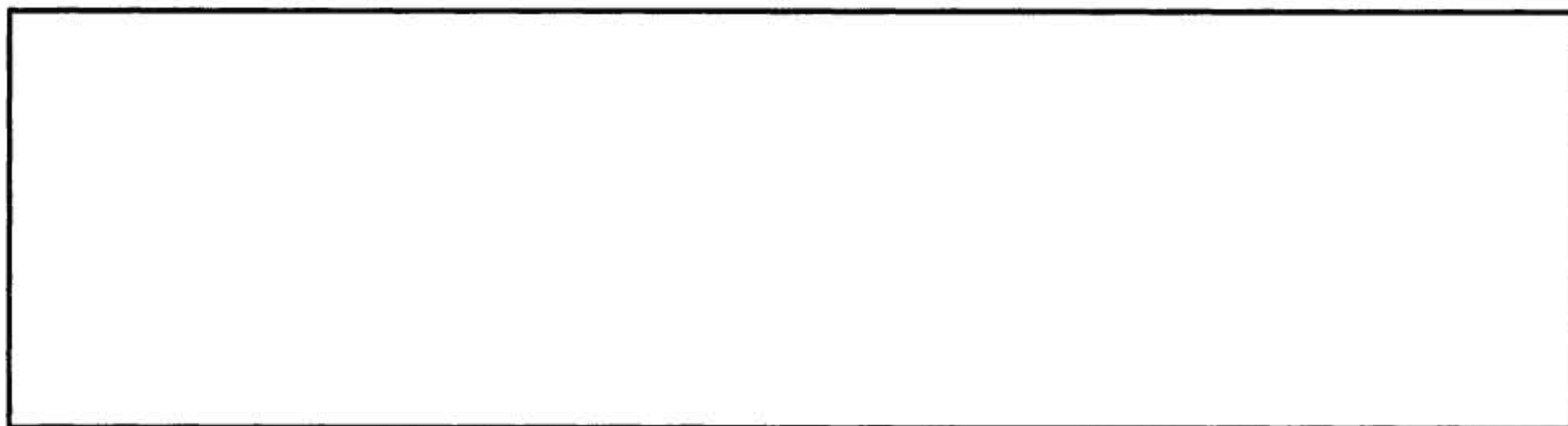






**BUMPER STICKER**

When your teacher has approved your outline, use pencil to create a rough draft in the space below. It is about one third of the size of your actual bumper sticker.



1. Show your rough draft to your teacher.
2. Decide on any changes you want to make.
3. Get your materials and create your bumper sticker.

## LESSON 2 VALUING WATER



### ACTIVITY 2-3 WATER INTERVIEW

#### SUMMARY

Students will interview a person who has had the experience of not having running water in their home. They will write an essay based on the interview.

#### CONTENT AREAS

technology, language arts, and social studies

#### GOAL

to appreciate the convenience of running water and to understand that not everyone has always had, or even today has, running water

#### TIME

two sessions in class and one out of class

#### ADVANCE PREPARATION

- Copy student pages.
- Identify and contact possible sources of interview subjects. You may want to send a letter home to families, contact a senior center, and ask other staff members at the school. If students will be working with individuals they do not already know, you should make the first contact and see if people are interested.

#### BACKGROUND INFORMATION

We take running water for granted. During this interview students will discover what it was like for someone to live without running water. Perhaps you have students in your class or school who have moved here from other countries and might be good interview sources. In such a case the project could be the work of both students. Other interview sources might be adults or students in your school who have lived in other countries. There may be older people in the community who lived in the United States without running water. You could contact a local senior center or retirement home and see if there are people there who would be interested. Also, students' grandparents or great-grandparents may be good sources.



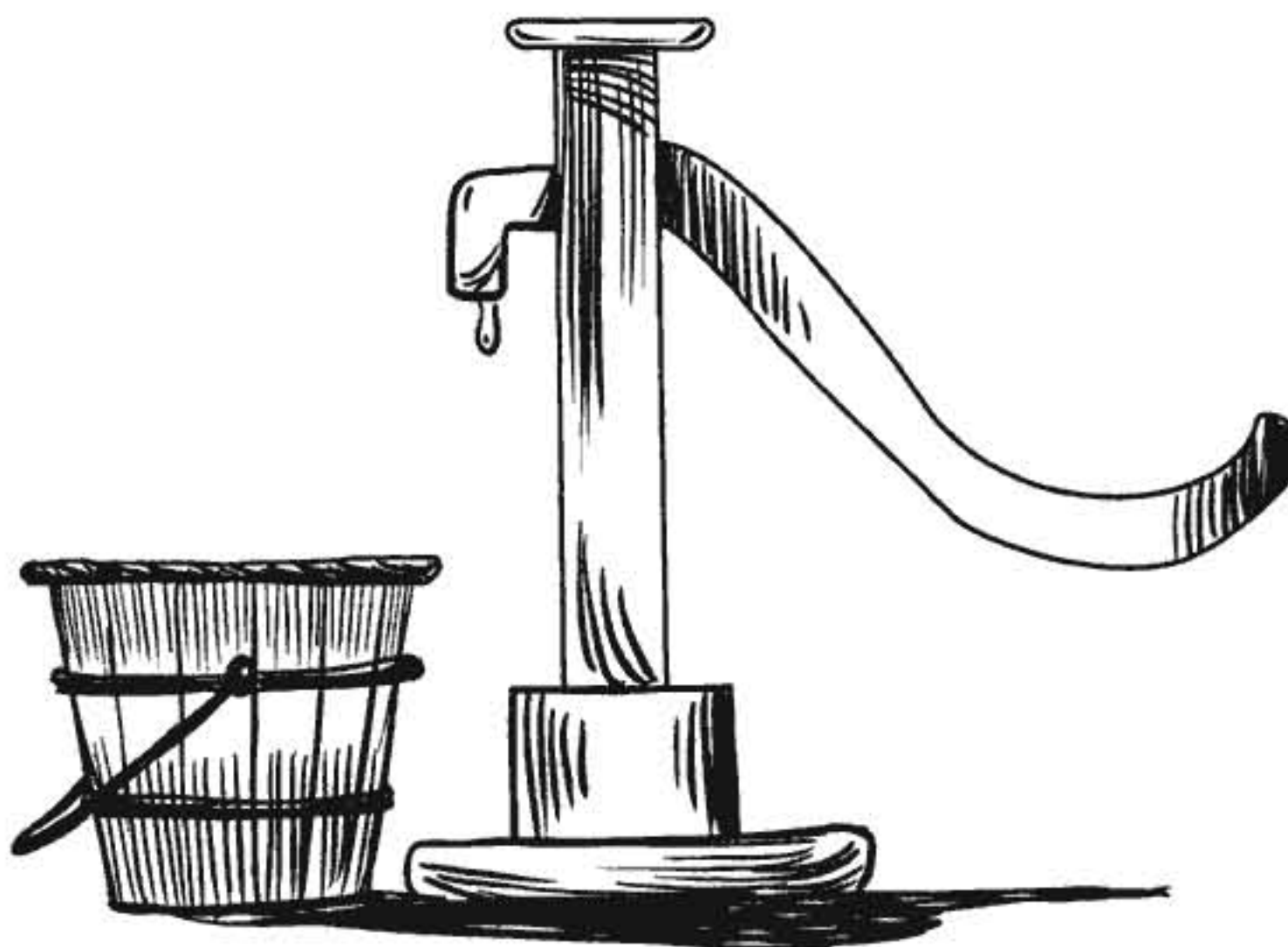




## ACTIVITY 2-3 WATER INTERVIEW

### TEACHER PROCEDURE

1. Ask students what it might be to live without running water in their homes. Ask how it would change their lives and daily routines.
2. Tell students they are going to have a chance to hear how it is to live without running water by interviewing someone.
3. Give students a practice interview session. Partner them with another student in the class. Each student should ask their partner the interview questions and record the answers. This will help prepare them for the actual interview. (The student being interviewed will have to pretend they lived without running water to answer the questions.)
4. Explain to students how to contact interview subjects. If there are students in your class who would be good interview subjects, pair them with other students.
5. If students are interviewing classmates or people in the school, the interview can take place in class. If they are interviewing people outside of class, the interview process will be a homework assignment. Tell students to prepare to spend one hour with the person they are interviewing.
6. Give students a second copy of the interview questions for the actual interview. Encourage them to think of additional questions ahead of time.
7. When the interviews are complete students can use the information to write an essay about the individual they interviewed. They might want to include a picture of the person. Remind students to thank the person they interviewed and give her/him a copy of the essay.
8. There are many ways to share this information with your class or other people. Your class might want to create a book and include all the interviews. You might have students read their essays to the class. You could create a bulletin board in the hall with the essays. Your class could make a presentation at a senior center.





ACTIVITY 2-3 WATER INTERVIEW

LIVING WITHOUT RUNNING WATER

You may use the following questions for your interview. You should also create at least three questions of your own before the interview.

Name of person you are interviewing \_\_\_\_\_

- 1. When and where did you live in a home without running water?

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- 2. Where did you get your water?

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- 3. How did you get water to your home?

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4. How did you use the water in your home?

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5. How did clothes get washed?

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6. How did people bathe?

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7. What did you do with the water when you were done with it?

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**MORE QUESTIONS**

8. \_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

9. \_\_\_\_\_

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10. \_\_\_\_\_

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