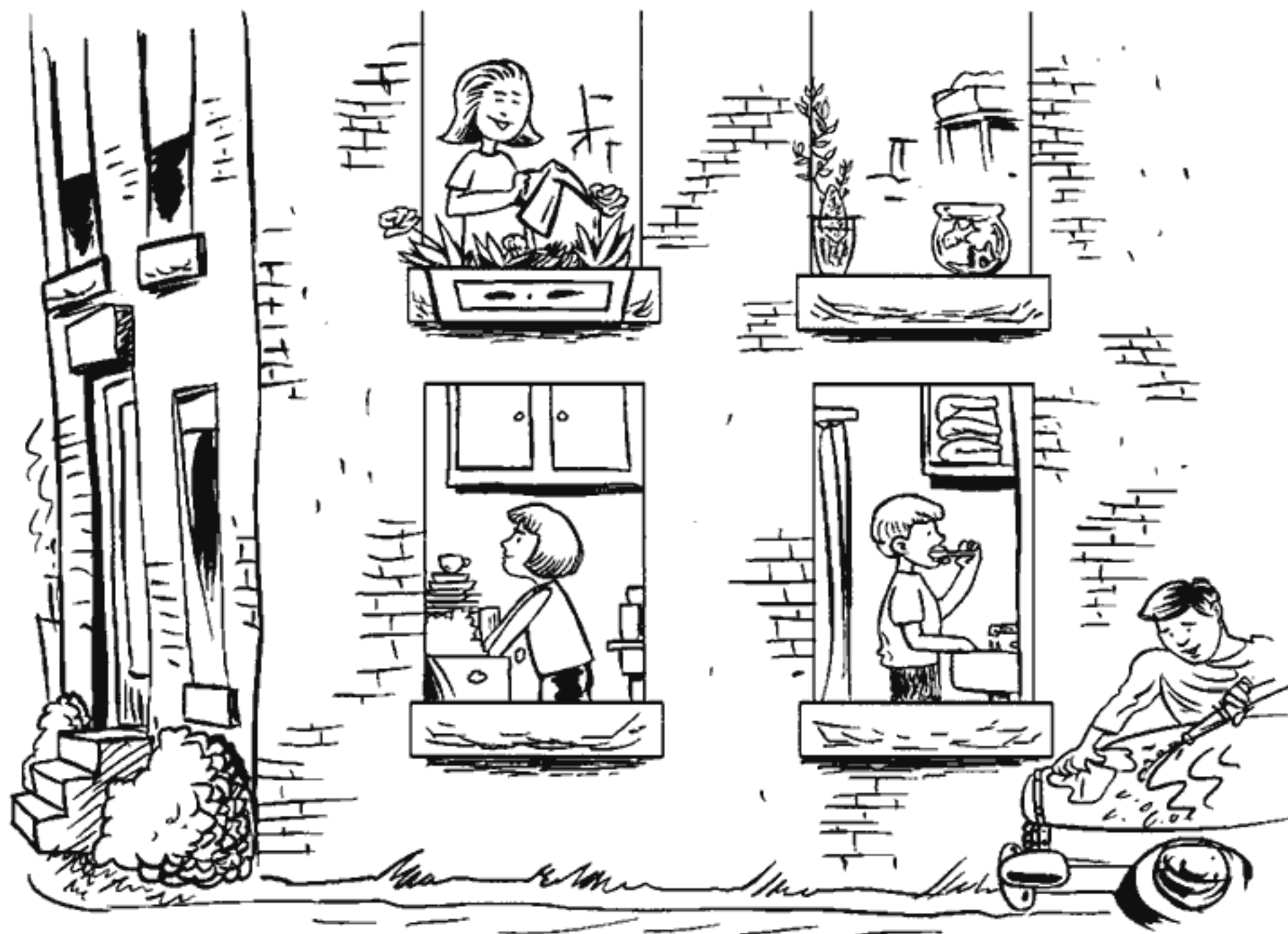


LESSON 1 - HOW WE USE WATER



LESSON 1 - HOW WE USE WATER

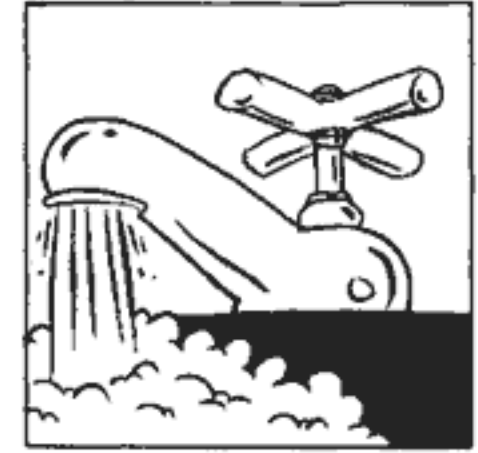
Third and fourth graders have been opening faucets and flushing toilets almost all their lives. These activities draw on that experience, asking them to gather, organize and incorporate new knowledge about how people use water. Students will apply different skills (acting, counting, drawing) to broaden their water awareness.

Water Charades begins the water thinking process, as students brainstorm and act out family water use.

The Family Water Tally asks students to collect data on how much water their families use. Categorizing water use and interpreting the data may stretch some of the students, but completing the summary as a class activity should help pull it together.

The third activity extends students' water horizons beyond themselves and their families to community use, as they prepare a Water Mural. The resulting final project can be shared with the school.

Lesson 1 How We Use Water



ACTIVITY 1-1 WATER CHARADES

SUMMARY Working in teams, students will list individual and family uses of water. They will use the list for a game of charades.

CONTENT AREAS social studies, science, drama

GOAL to help students discover the ways that people use water and to think about individual and family uses of water

TIME one session

MATERIALS

- paper
- pencil or pen

ADVANCE PREPARATION

- Prepare small pieces of paper.
- Create student working groups.

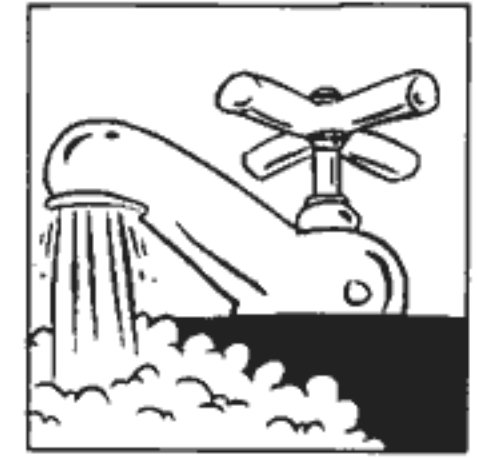
TEACHER PROCEDURE

1. Divide the class into teams of four or five students.
2. On small pieces of paper each team should write down at least five different ways that they individually use water or that their families use water. They should label the use individual or family. Here are common examples; students may think of others.

| INDIVIDUAL USE | FAMILY USE |
|---------------------|-----------------------------|
| Brushing teeth | Cooking |
| Flushing the toilet | Cleaning |
| Washing hands | Washing dishes |
| Washing face | Doing laundry |
| Taking a shower | Watering the garden or lawn |
| Taking a bath | Filling the pool |
| Drinking water | Washing the car |

3. One team will choose a slip of paper from another team and act out the water use to the remaining teams. Depending on the water use, one or more students can act it out.
4. The other teams will try to guess the water use the first team is acting out.
5. If you want to keep score, the team that acted out the water use and the team that guessed it will get one point. For an extra point the guessing team should say if the use is individual or family.

Lesson 1 How We Use Water



ACTIVITY 1-2

FAMILY WATER TALLY

SUMMARY _____ Students will collect water use data at home and bring this information back to the classroom to discuss and study with classmates.

CONTENT AREAS _____ social studies, math, science

GOAL _____ to learn the ways that a family uses water

TIME _____ two sessions and one family assignment

MATERIALS _____
- home water use data page
- pencil or pen

ADVANCE PREPARATION

- Copy enough data pages for all students.
- Create a class data summary page for recording class data--on overhead, board, or flip chart.

TEACHER PROCEDURE

1. Collecting the Family Water Use Data
 - a. Give each student one copy of each Family Data Collecting page.
 - b. Explain that they should take the pages home for the weekend and post them in the correct locations. You may also want to send home the letter to families found at the end of this unit. It explains this activity to students' families.
 - c. Each time a family member uses water s/he should record it on the data page in that location.
 - d. After one weekend day students bring the data to the classroom.
2. Preparing Family Data Summary
 - a. Each student will count the number of times the family did each water use on data collection day and record that information on the Family Data Summary Form.
3. Completing the Class Data Summary
 - a. Make a list of all class water uses on the board.
 - b. Distribute a Class Data Summary form to each student. Create a similar table on the board, flip chart, or overhead
 - c. Complete the Class Data Summary totals for the class's water use categories. Optional: You may also want to have students figure class averages for each category (total ÷ number of students)
4. Students will answer the questions on their own or you can use them to lead a class discussion. Note that number four and number seven are optional and can only be answered if you figured the class averages.

Name _____ Date _____

Family Data Collecting Page

Location: Kitchen

Water Use

Check off Here

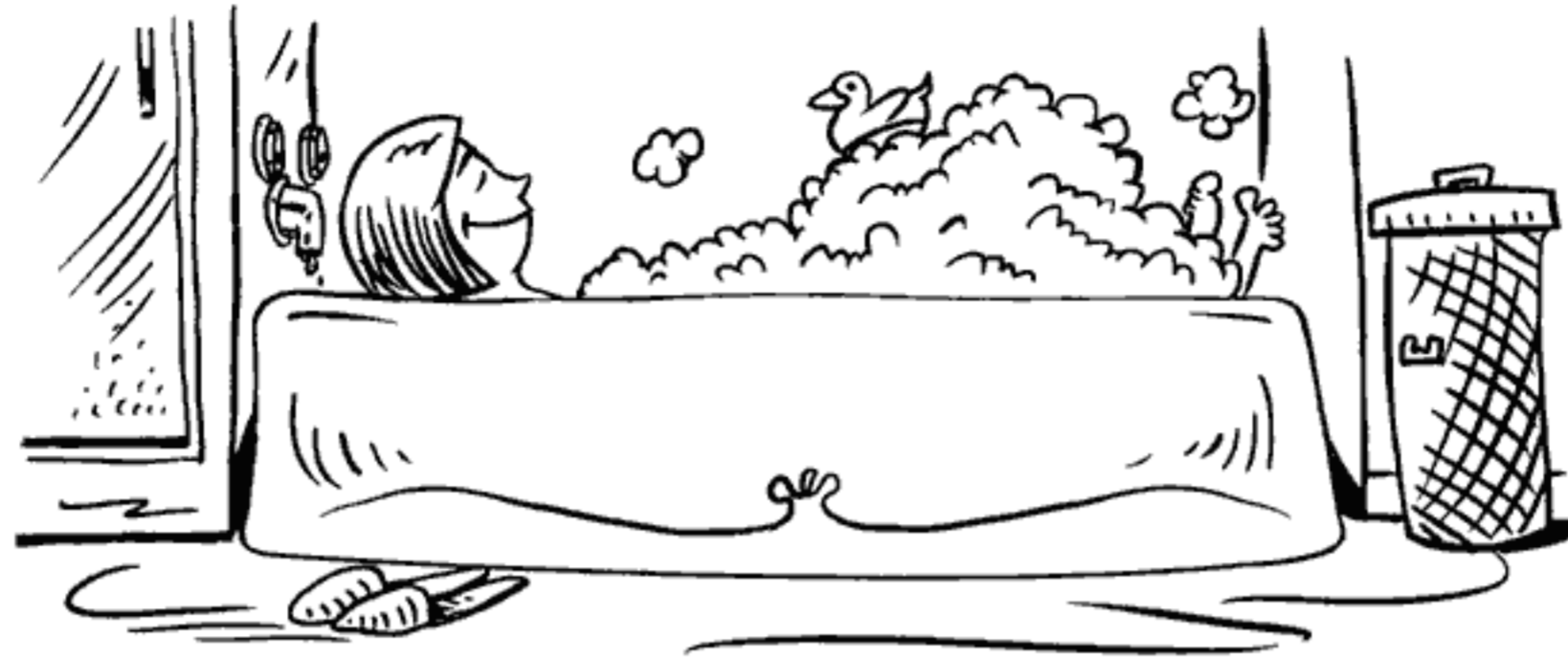
| | |
|------------------------|--|
| washing dishes by hand | |
| run dishwasher | |
| cooking | |
| cleaning | |
| watering house plants | |
| water for pets | |
| drinking | |
| rinsing food | |
| | |
| | |



Student Page
Activity 1 - 2

Name _____ Date _____

Family Data Collecting Page



Location: Bathroom

Water Use

Check off Here

| | |
|-------------------|--|
| flushing toilet | |
| brushing teeth | |
| washing hands | |
| washing face | |
| showering | |
| taking a bath | |
| drinking | |
| cleaning bathroom | |
| | |

Name _____ Date _____

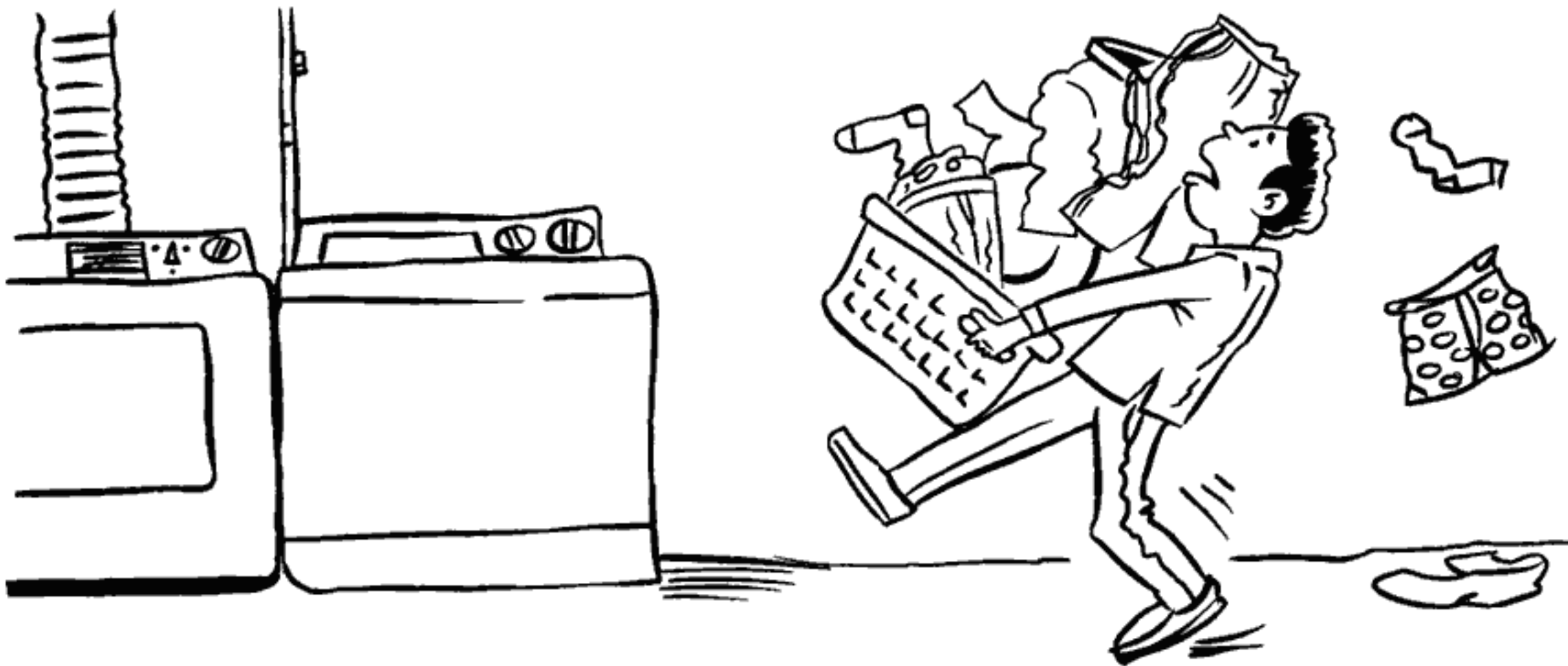
Family Data Collecting Page

Location: Laundry

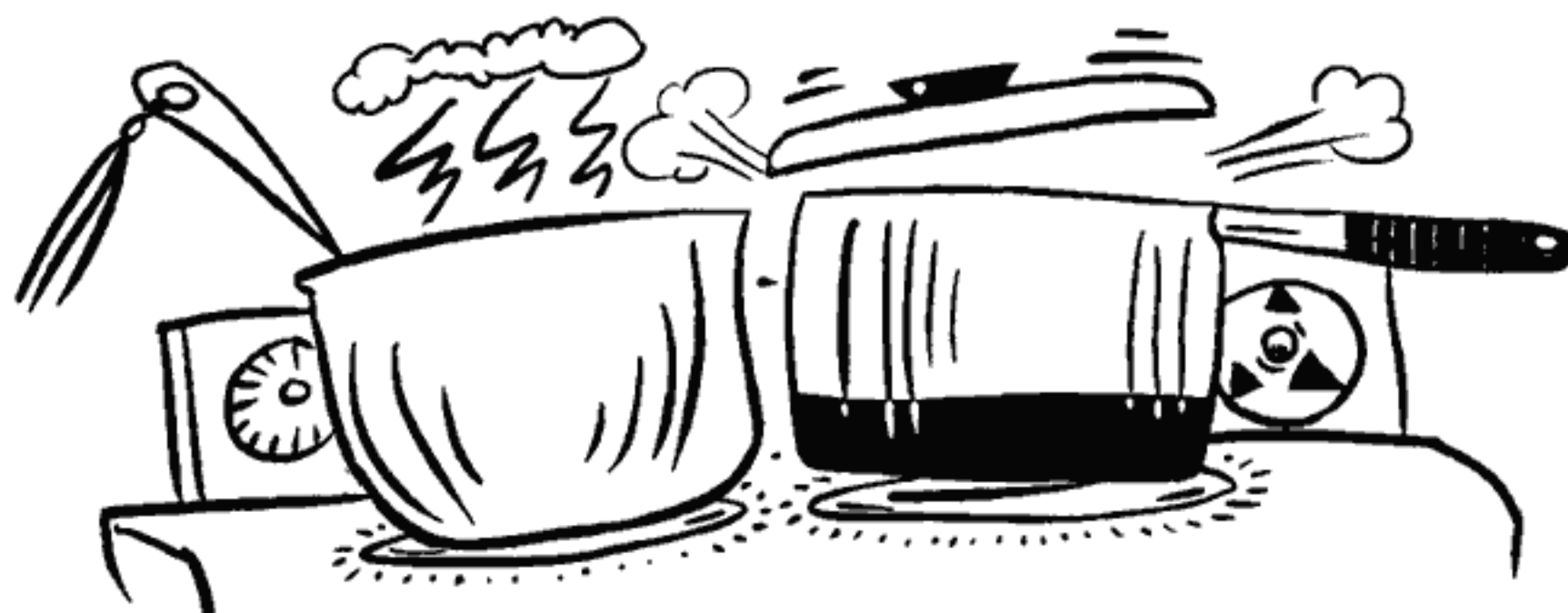
Water Use

Check off Here

| | |
|-------------------------|--|
| washing clothes by hand | |
| running washing machine | |
| | |
| | |
| | |
| | |
| | |
| | |



Family Data Summary



Water Use

My Family's Total for one Day

| | |
|------------------------|--|
| washing dishes by hand | |
| run dishwasher | |
| cooking | |
| cleaning | |
| watering house plants | |
| water for pets | |
| drinking | |
| rinsing food | |
| flushing toilet | |

Name _____ Date _____

Family Data Summary

Water Use

My Family's Total for One Day

| | |
|-------------------------|--|
| showering | |
| taking a bath | |
| drinking | |
| cleaning bathroom | |
| washing clothes by hand | |
| running washing machine | |
| brushing teeth | |
| washing hands | |
| washing face | |



Student Page
Activity 1 - 2

Class Data Summary



Water Use

Class Total

Class Average
(Total divided by
number of students)

| | | |
|------------------------|--|--|
| washing dishes by hand | | |
| run dishwasher | | |
| cooking | | |
| cleaning | | |
| watering house plants | | |
| water for pets | | |
| drinking | | |
| rinsing food | | |
| flushing toilet | | |

Class Data Summary



Water Use

Class Total

Class Average
(Total divided by
number of students)

| | | |
|-------------------------|--|--|
| showering . | | |
| taking a bath | | |
| drinking | | |
| cleaning bathroom | | |
| washing clothes by hand | | |
| running washing machine | | |
| brushing teeth | | |
| washing hands | | |
| washing face | | |

Family Water Use



1. How many different uses of water does your class have?

2. How was water used the most by the families in your class?

3. How many times was it used?

4. What was the class average for that use?
(optional)

Family Water Use



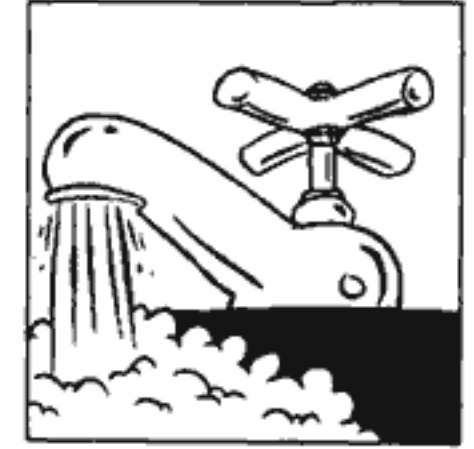
5. Which water use did families do least often?

6. How many times was it done in one day for the class?

7. How did the data from your family compare with the class averages? (optional)

Lesson 1 How We Use Water

ACTIVITY 1-2 FAMILY WATER TALLY



Dear Families,

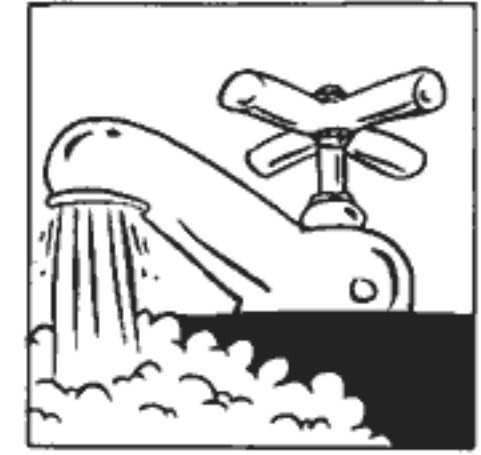
In our class we are learning about the many different ways that we use water. We are trying to discover how our families use water at home. We would like each family to help us with this investigation.

Each student in the class will bring home several "Family Data Collecting Pages." These should be posted in the different rooms in your home where water is used, for example, the bathroom and the kitchen. Don't forget to include water for washing clothes, whether you do it at home or at a laundromat. When each family member uses water in the home s/he should record it on the data page. Students should bring them back to the classroom on _____.

Thank you for your help with this project. I hope that your family will enjoy learning about water with our class!

Sincerely,

Lesson 1 How We Use Water



ACTIVITY 1-3 COMMUNITY WATER USE MURAL

SUMMARY Students will work together to design and make a mural about community water use.

CONTENT AREAS social studies, art

GOAL to create a visual display of how a community uses water

TIME approximately three class sessions

MATERIALS

- large piece of paper for a mural (3' x 9')
- paper for design (18" x 18")
- pencils
- paint or markers

ADVANCE PREPARATION

- Prepare 3' x 9' paper.
- Create student working groups.
- Prepare 18" x 18" sketch paper for student groups.

TEACHER PROCEDURE

Session One

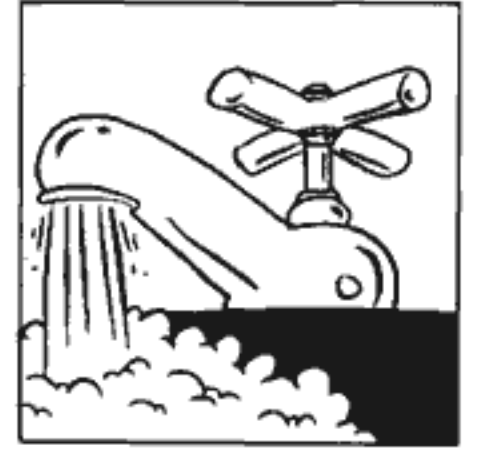
1. Brainstorm with the class about the ways a community uses water. List their ideas on the board. (Ex: fire fighting, street cleaning, swimming pools, ice skating rinks, gardens)
2. Explain to students that they will be creating a mural that shows a community using water.
3. Develop a design for the mural. Use a large piece of paper (approximately 3' x 9') taped on a wall or board where everyone can see. Tell the students this will be the size of the mural. The class should choose 12 different "scenes" for the mural (12 is based on a class size of 24). Ideally each scene will be a part of a whole picture. Lay out the design of the mural on the piece of paper. Nothing needs to be drawn yet, just words and blocking out areas of the paper will suffice for the planning stages.
4. Assign "scenes" to pairs of students. Each pair of students should work with pencils and a 18" x 18" piece of paper to design their section of the mural.

Session Two

5. On the floor or a wall create a 3' x 9' space so that all the pieces of the mural can be fit together for a "rough draft." You can do this on a piece of paper on a wall or by making a 3' x 9' area on the floor with tape. Place the students' preliminary scenes in place. Discuss how it looks. Are there empty spaces? Do the designs look good together? Will the background need filling in? Discuss what works well and what needs changing.
6. Pairs of students redraw their pictures using suggestions from the class discussion. Students bring their pictures to the group for final discussion.

Lesson 1 How We Use Water

ACTIVITY 1-3 COMMUNITY WATER USE MURAL



TEACHER PROCEDURE

Session Three

7. Place a 3' x 9' piece of paper on the floor. Student pairs draw their designs on the mural in pencil. Probably no more than three pairs can work at one time.
8. When everyone has finished his/her section in pencil review the mural again. Is it ready for painting and coloring with markers or crayons? Make any necessary changes.
9. Student pairs paint or color in their portion of the mural.
10. Individual students can add background and other necessary details.
11. Hang in a prominent location and admire!

LESSON 2 - HOW WATER IS DELIVERED

