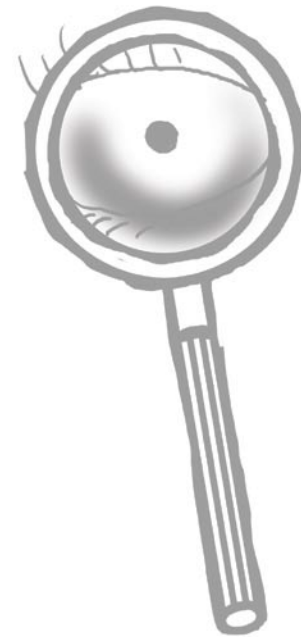




## Water Watchers

(Special Teachers' Guide)



### Type of Activity:

At home observation and water use investigation  
In-class discussion

### Classroom Time:

25 - 35 minutes

### Home Time:

30 - 40 minutes

### At Home Materials:

Bucket or large container  
Measuring cup  
Friend or family member

### Printed Materials:

Water Watchers student activity sheet

### Lesson Objectives:

- ◆ Discuss why water conservation is important.
- ◆ Observe and record water use behaviors of students and their family members.
- ◆ Learn how to use water wisely and look for opportunities to conserve.
- ◆ Understand that even simple efforts to conserve water can make a big difference.

### Activity Procedure:

There are two parts to this activity:

1. Water Watchers student activity sheet, which includes at home observation of water use and a water use experiment.
2. In class discussion of water use and conservation.

### Suggested Ways to Conserve:

#### Bathroom:

- Install low flow showerheads (2.5 gal/minute vs. 5 gal/minute).
- Install low flow toilets (1.6 gal/flush or less vs. 2 - 5 gal/flush).
- Turn off the water while washing your face or brushing your teeth (saves 4 - 10 gal/day).
- Take shorter showers.
- Fix leaky toilets.

#### Kitchen:

- Only run the dishwasher when it is full.
- When washing dishes by hand, turn off the water when soaping, then rinse.
- Fix leaky faucets and turn a dripping faucet all the way off.
- Store drinking water in the refrigerator rather than letting the tap run until it gets cold.

#### Laundry:

- Only run full loads of laundry.

#### Outside:

- Install drip irrigation systems.
- Plant a xeriscape landscape which requires less water.
- Water your lawn only when and as long as necessary.
- Remember to turn your sprinklers off (set a timer).
- Use buckets and sponges to wash pets, cars and outdoor items.
- Use mulch to avoid evaporation.
- Water lawns during the early morning or the evening to avoid evaporation.

**CHECK THIS OUT!!**

#### WATER CONSERVATION TIP:

Go to this website and calculate how many gallons of water your family uses daily, monthly and annually.

[www.tampagov.net/dept\\_water/conservation\\_education/customers/water\\_use\\_calculator.asp](http://www.tampagov.net/dept_water/conservation_education/customers/water_use_calculator.asp)

## Activity Directions:

**Discuss** that water is a precious and limited resource. Remind students that less than 1% of the Earth's water is useable, therefore it is important to conserve water. Hand out the Water Watchers student activity sheet. The take home activity includes two parts: **The Stakeout** and **Run vs. Rinse** investigation.

**Explain The Stakeout** side of the Water Watchers activity sheet. This activity sheet is designed for students to observe and learn how water is used, wasted and saved at home. As special agents, students will observe and question family members and then answer the questions on the activity sheet.

**The Run vs. Rinse** side of the Water Watcher student activity sheet is an at home experiment. Often times we let water run when we do things such as wash our hands and brush our teeth. As a result, we use a lot more water than we actually need. At home, students will measure how much water is used to brush teeth with the water running (Running method) and then how much water is used if the water gets turned off while brushing and is only used for rinsing (Rinsing method). Have students follow the directions on the **Water Watchers: Run vs. Rinse** activity sheet at home. Students should report the results of their investigation on their activity sheet.

The following day, **facilitate** a class discussion on ways people use water everyday. Discuss essential and wasteful water uses. Have each student report a water use they observed during **The Stakeout** that surprised them, seemed wasteful or used more water than they would have thought. Talk about each category on **The Stakeout** side of the activity sheet and how the students might save water in each category. Brainstorm conservation ideas.

From the **Run vs. Rinse** investigation, invite a number of students to share how many cups of water were used in the Running method and how many were used in the Rinsing method. Ask students to share how many cups of water they saved by Rinsing instead of Running. Then, to create the big picture, total the amount of water saved for the whole class. Discuss how small, individual water saving actions can add up and make a significant difference as a whole.

## Background Information for Class Discussion:

### Why conserve water?

Here in Colorado, we live in a semi-arid environment, so water conservation is vital. **Less than 1% of the Earth's water is useable**, therefore it is important to consume it wisely and reduce how much we use overall. Population growth puts an increased demand on our water sources. Human and pet life, aquatic life, animal life, agriculture and industry all depend on water. Conserving water helps preserve the environment by protecting habitats such as wetlands, lakes and streams, and helps save money by reducing water bills, water heating bills and water treatment costs.



## How do we use water?

It is surprising how much water we use in our daily activities, such as brushing our teeth, washing our hands, doing dishes, showering and so on. The following outlines how much water is used in various areas of our households:

**Bathroom** (over 75% of all water used in a household is used in the bathroom):

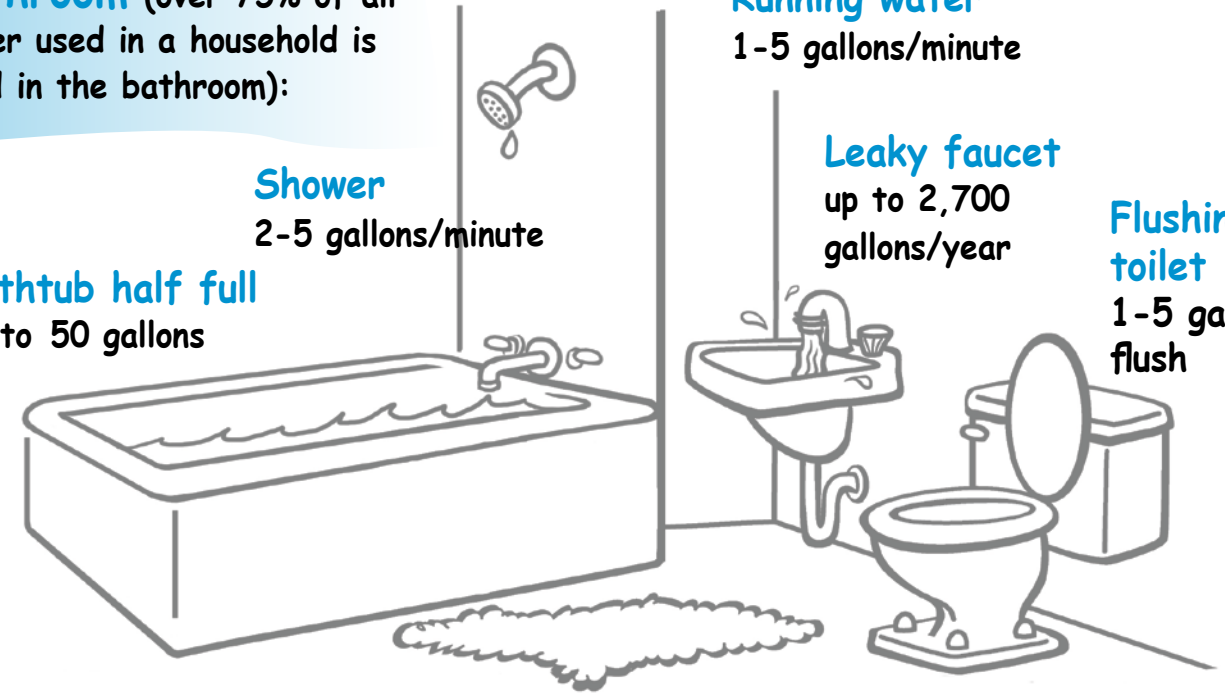
**Shower**  
2-5 gallons/minute

**Bathtub half full**  
up to 50 gallons

**Running water**  
1-5 gallons/minute

**Leaky faucet**  
up to 2,700  
gallons/year

**Flushing a  
toilet**  
1-5 gallons/  
flush



## Kitchen

**Running water**  
1-5 gallons/  
minute

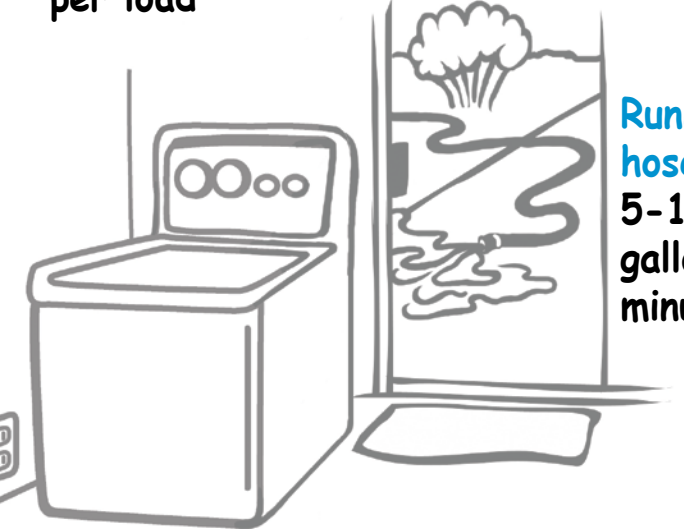
**Leaky faucet**  
up to 2,700  
gallons/year



**Dishwasher**  
15 gallons/load

## Laundry

**Washing Machine**  
up to 50 gallons  
per load



## Outside

**Running  
hose**  
5-10  
gallons/  
minute