

Water Watchers

Grade level: 3rd – 5th

Standard/ GLE Code: SC.3.2.5, SC.4.3.4, SC.5.3.5

Time commitment: 40 minutes

Materials Needed:

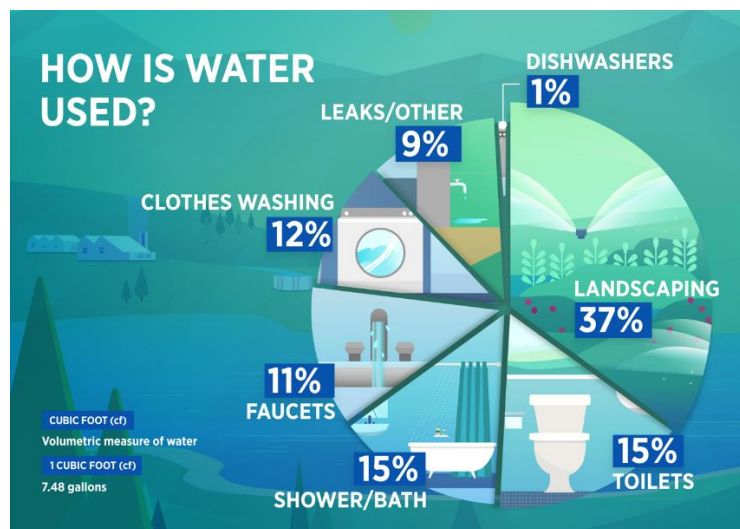
- Food coloring
- Student workbook

Educational Messages:

- Learn about water use in Colorado Springs.
- Discover what a water footprint is and calculate their own.
- Determine best ways to conserve water.
- Take action by testing toilets for leaks.

Our water resources are limited so using water wisely is essential to ensuring supply.

The average residential water use in Colorado Springs is 78 gallons per person per day. 37% of the water used in a residential home is applied outdoors for landscaping. Showers and toilets use the most water inside a home.





Suggested format:

1. Review the Colorado Springs Residential water use pie chart with the students and determine where the most water is used overall. Ask students what “conservation” means. Have them brainstorm ways they can use water wisely.
2. Have students complete the Water Watchers student workbook by taking the WaterSense quiz and see how they score.
3. Explain how to test their toilets at home for silent leaks and assign this task as homework. Tally the class results and watch the YouTube video [“Stella Fixes a leaky Flapper”](#).
4. Discuss what a water footprint is. Review free materials on the [Water Calculator website](#), have students complete their own water footprint calculator and consider watching the Aqua water conservation video. Have students complete the “How Much Water is in Your Food?” student page and review answers.

Water Watchers STUDENT WORKSHEET ANSWER KEY

Hey Kids, It's Time to Test Your WaterSense! Think you know everything there is to know about water? You can't be sure until you test your WaterSense. *Circle your answers below. Use the teacher answer key to see how many questions you answer correctly!*

1. When is the best time of day to water your lawn?
 - A. Early morning or late evening
 - B. In the afternoon
 - C. All day long

1. Answer: A

Although it is fun to run through the sprinklers at the hottest time of day, your lawn should only be watered before 10 am or after 6 pm when it's cooler. Watering the yard when it's really hot outside causes the water to evaporate before the plants have time to drink it.

2. How much water could you save by washing your bike with a bucket and sponge rather than letting the hose run?
 - A. 1 gallon a minute
 - B. 3 gallons a minute
 - C. 4 gallons a minute
 - D. 6 gallons a minute

2. Answer: D

Washing your bike with a bucket and sponge will not only get your bike extra clean, it will also save water. Hoses can waste more than 6 gallons a minute while a bucket only uses a few gallons for a whole wash. Use a bucket and sponge when you help your parents wash the car, too!

3. True or False: It isn't important to save water because there is so much of it on Earth.



Colorado Springs Utilities

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- A. True
- B. False

3. Answer: B

Although there is a lot of water on earth (70 percent of the earth's surface!), most of it is salt water so you can't drink it. It is very important to save the water we use every day because less than 1 percent of the earth's water can be used by people!

4. Which of these ways to wash the car saves the most water?

- A. Wash it in the driveway with the garden hose
- B. Drive it into the lake
- C. Take it through a car wash that recycles water

4. Answer: C

Many car washes save more water than if you wash your car at home. They do this by recycling the water that they use instead of letting it run down the sewer drains. Tell your parents to search online to find a "water-efficient" car wash near your house.

5. How much water does a family of four (mom, dad, brother, and sister) use everyday?

- A. 50
- B. 116
- C. 250
- D. 312

5. Answer: D

How can a small family use so much water? It may seem hard to believe, but the average person in Colorado Springs uses about 78 gallons of water each day—that's enough to fill 1,600 drinking glasses! There are many things you can do to save water.

6. Stuck helping mom or dad wash the dishes? Which may use less water?

- A. Washing dishes by hand
- B. Washing dishes in a dishwasher

6. Answer: B

To waste the least amount of water in the kitchen, use your dishwasher only when it's filled all of the way with dirty dishes. You could also fill the sink with water instead of running the tap.

7. True or False: Keeping the water running when you brush your teeth wastes a lot of water.

- A. True
- B. False

7. Answer: A



You can save up to 8 gallons of water by turning off the faucet when you brush your teeth in the morning and before bedtime. That adds up to more than 100 gallons of water each month!

8. Which of the following uses less water?

- A. Taking a 5-minute shower
- B. Taking a bath

8. Answer: A

While it might be more fun to splash in a warm bath, it takes 50 gallons of water to fill a tub but only 10 to 15 gallons for a 5-minute shower. If you do take a bath, put the stopper in the drain right away and change the temperature as you fill the tub. Consider filling it only half full.

9. Which of these everyday objects is a water-saving tool?

- A. A bucket
- B. A clock
- C. A broom
- D. All of the above

9. Answer: D

Put a bucket under the tap while you make the water the right temperature. The water you collect can be used to water plants or fill up a squirt gun. Use a clock to keep your showers under 5 minutes. Use a broom instead of the hose to clean your driveway or sidewalk.

10. Which of these activities wastes the MOST water per day in the average home?

- A. Running the tap while washing dishes
- B. Using a garbage disposal
- C. A leaky toilet
- D. Long showers

10. Answer: C

A leaky toilet can waste about 20- 200 gallons of water every day! Ask to help your parents test your toilets for leaks. Place 10 drops of food coloring in the tank and if the color shows in the bowl after 15 minutes, you have a leak.

11. True or False: It's okay to flush some trash down the toilet like cotton balls and tissue.

- A. True
- B. False

11. Answer: B

Flushing the toilet for silly reasons wastes a lot of water. Cutting out 1 flush per day saves enough water to wash 32 loads of laundry each year.

12. What should you do if you see or hear a leaky faucet in your house?



- A. Ignore it—drips are no big deal
- B. Do nothing—there is no way to fix a drippy faucet
- C. Tell your parents

12. Answer: C

Leaky faucets are big water wasters. If you see or hear a leaky faucet, tell your parents about it so they can get it fixed. If you don't, those drips and drops can add up to 2,700 gallons of wasted water in one year!

SCORING:

9 or more questions correct: Congratulations, you're a WaterSense Hero! You understand that water is a precious resource that must be used more efficiently.

6-8 questions correct: You're a WaterSense Whiz Kid!

Less than 6 questions correct: You're a WaterSense Wonder! But that means there's room for improvement!

To learn more about why water efficiency is important and how you can become water-efficient, visit www.epa.gov/watersense.

Toilet Testing Data Collection:

1. Have your students test their toilets at home for silent leaks.

Toilet Leak Testing Instructions:

- a. Add 10 drops of food coloring into the water in the tank.
- b. Do not flush.
- c. After 15 minutes, look in the bowl and see if colored water appears.
- d. You have a leak if colored water from the tank seeps into the bowl. Silent leaking toilets can waste 20 gallons of water a day!

2. Tally your class data:

_____ Number of toilets tested

_____ Number of toilets leaking

3. Determine the amount of water lost to "silent" leaks by multiplying the number of leaking toilets by 20 gallons per day: _____ Amount of water lost per day (gallons).
4. Figure out how much water is lost in a year by multiplying by 365: _____ Amount of water lost per year (gallons).
5. Have the class watch the 2.5-minute YouTube video on how a 4th grader can replace a toilet flapper: ["Stella Fixes a leaky Flapper"](#)
6. Fix toilet flappers or replace leaking toilets.



7. Calculate how much water your class is saving by fixing or replacing leaking toilets:

_____ Number of leaking toilets fixed

_____ Multiply by 20 gallons per day

_____ Multiply by 365 days = number gallons your class has saved per year

Please share your class results by emailing communityrelations@csu.org

What is a Water Footprint?

Your water footprint is the amount of water you consume in your daily life, including the water used to grow the food you eat, to produce the energy you use and for all of the products in your daily life – your books, music, house, car, furniture and the clothes you wear.

Ask students to guess how much water they use every day – not just for drinking, brushing teeth, washing hands, cooking and cleaning, but for the products they use. Students can calculate their own water footprint and see if they estimated correctly. Other useful water footprint information and water conservation educational materials can be found on the water calculator website: <https://www.watercalculator.org/education/teaching-conservation-with-water-footprint-calculator/>

How Much Water is in Your Food? Student Page **ANSWER KEY:**

