

Name: _____



EPA WaterSense

Fix a Leak Week Student Worksheet

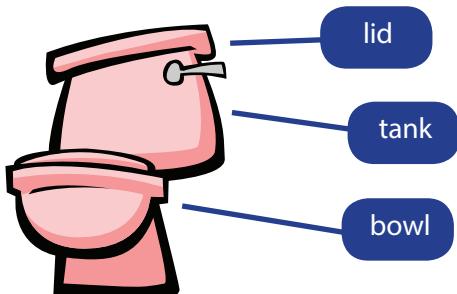
Lesson 1: Be a Leak Detective

Some leaks are harder to find than others. They can be sneaky and silent, and you have to be a sleuth to detect them. Here is an experiment to help you track them down.

Activity: Check for Toilet Leaks

For this activity you will need:

- Food coloring or dye tablets
- A clock or watch
- A helpful grown-up
- A toilet



Instructions:

1. Remove the lid off the toilet tank. (Ask an adult for help—the lid can be heavy and hard to move.)
2. Add a few drops of food coloring or a dye tablet into the tank. Do not flush the toilet.
3. Wait 10 minutes. If color appears in the toilet bowl without flushing, it has a leak.
4. Flush the toilet immediately after the experiment ends to avoid staining inside of the tank.

Do the Math:

A constantly running toilet can waste more than 200 gallons of water every day. How many gallons will the leaking toilet waste in a week (7 days)?

Show your work here:

Write your answer here: _____ gallons

Bonus: How many 8-ounce glasses of water could you fill with the amount of water saved from fixing the leaking toilet?

Conversion Equation

Fluid Ounces to Gallons

128 fluid ounces = 1 gallon

Write above answer here: _____ gallons

Multiply it by x 128 fluid ounces

= _____ fluid ounces

Divide it by ÷ 8 fluid ounces

= _____ glasses of water



Lesson 2: Do a Drip Scavenger Hunt

While toilet leaks are usually the biggest water wasters, even small drips from a faucet can add up.

Activity: Check for Dripping Faucets, Showers, Pipes, and Hoses

For this activity you will need:

- A watch or clock with a second hand

Instructions:

1. Walk through your whole house, looking and listening as you go from room to room. Use the list at right as a guide on where to check for drips.
2. Check the appropriate checkbox if you find a drip or leak.
3. If you find a drip, use your watch to measure how many times it drips in one minute. If you find a pipe that isn't dripping, but is wet, write that down too.

Do the Math:

If a faucet leaks at the rate of 1 drip per second, how many gallons of water does it waste in 1 year?

Show your work here:

1 drip x 60 seconds x
60 minutes x 24 hours
x 365 days

= _____ drips

Divide it by

÷ 10,000 drips

Write your answer here: _____

Conversion Equation

Drips to Gallons

10,000 drips = 1 gallon

If a shower leaks at the rate of 10 drips per minute, how many gallons does it waste in 1 year?

Show your work here:

10 drips x 60 minutes
x 24 hours x 365 days

= _____ drips

Divide it by

÷ 10,000 drips

Write your answer here: _____

Conversion Equation

Drips to Gallons

10,000 drips = 1 gallon

Lesson 3: Share What You Learned

Now that you're an expert leak detective, share what you've learned with your family. Fixing leaks is a good start, plus there are many more ways you can save water and have fun doing it.

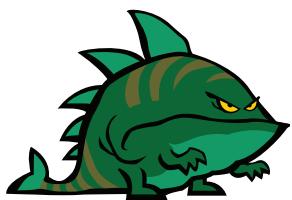
Activity: Test Your WaterSense Game

For this activity you will need:

- Access to a computer with Internet or a paper handout of the game from your teacher

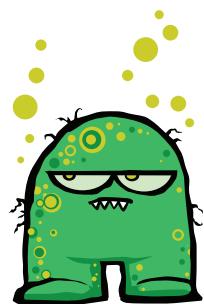
Instructions:

- Log on to www.epa.gov/watersense/kids/games.htm to play Test Your WaterSense.
- Move Flo, the water-saving character, through water pipes and answer questions while avoiding water-wasting monsters. Use the information you've learned in class and more facts found on the WaterSense Kids' website to test your knowledge.
- Challenge your family to see who can get the best score.



Drainiac

Drainiac lets water gush down the drain, especially when she brushes her teeth. This drains our water supply. Turn off the water while you brush your teeth and save eight gallons every time!



Swirly

Swirly wastes water by flushing the toilet too much. Don't use your toilet as a trashcan. If you flush just one less time a day, you could help save more than 500 gallons a year!



Drip Drip

Drip Drip likes to hear the sound of his own name. That's why he lets his faucet leak, wasting more than 3,000 gallons of water a year! Tightening the tap or replacing a washer can fix this problem.



Sogosaurus

Sogosaurus leaves her sprinkler on even after a rainfall. Make sure your family waters the yard only when needed—and don't water the sidewalk!

For More Information

Visit the WaterSense Fix a Leak Week site: www.epa.gov/watersense.