



“How Much Do You Use?”

Background

DC Water

DC Water distributes drinking water and collects and treats wastewater for more than 672,000 residents and 17.8 million annual visitors in the District of Columbia. DC Water also provides wholesale wastewater treatment services for 1.6 million people in Montgomery and Prince George's counties in Maryland, and Fairfax and Loudoun counties in Virginia. We are proud to provide these vital, safe, and high-quality services to our customers while also protecting and enhancing our environment.

Imagine a Day Without Water

To distribute drinking water, DC Water operates more than 1,300 miles of pipes, four pumping stations, five reservoirs, four elevated water storage tanks, 43,860 valves and 9,500 public hydrants. To collect wastewater, DC Water operates 1,900 miles of sanitary and combined sewers, 22 flow-metering stations, and nine off-site wastewater pumping stations. To treat wastewater, DC Water operates the Blue Plains Advanced Wastewater Treatment Plant, the largest advanced wastewater treatment facility in the world.

Though these systems may be “out of sight, out of mind” to some, they deliver a resource that is vital to us all and they must be maintained in order for us to engage in our daily activities and maintain quality of life. It is for this reason that the [Value of Water Campaign](#) sponsors “[Imagine a Day Without Water](#)”—to highlight the importance of this vital resource and the infrastructure required to provide fresh, clean drinking water to homes and business across the country.

Activity Description

“How Much Do You Use” is a visual way to represent the average daily water use in an American household. Students are able to estimate the percentage of their daily water use is devoted to each of 7 activities, then compare their estimates to industry statistics.

Student Objectives

- Reinforces ratios and proportional relationship standards through recognizing that parts of 100 are percentages

Materials

- “How Much Do You Use?” Worksheet and Key
- Crayons/Markers/Colored Pencils (optional)

Procedure

1. Have students read and follow the directions on the worksheet
2. Provide students with a copy of the key or display the key for the entire class so that they may compare their estimates

Extension

1. Have students set up proportions based on the percentages in the lesson to calculate how many of gallons they would use if they conserved more water.
 - a. Ex. Jenny reduced her water usage from 100 gallons per day to 75 gallons per day. If hand washing is 15% of daily water use, how many gallons of water does she now use?