



DALLAS ARBORETUM  
Education

*Garden STEM at Home*  
*Every Drop Counts*



WE GROW MINDS, TOO.

## EVERY DROP COUNTS



### OBJECTIVE:

STUDENTS WILL MONITOR THEIR WATER CONSUMPTION AND DEVELOP A PLAN TO LIMIT WASTE.

### SOURCE

Project Learning Tree PreK-8 Activity Guide

### BACKGROUND

The United States uses over 400 billion gallons of water each day. This water is largely used by industry, agriculture and utilities, but it is also used for everyday things like washing, flushing, laundry, cleaning, watering, cooking and drinking.

Where does our drinking water come from? Half of it is groundwater, which is water that fills the spaces between rocks and soil underground. The trickle down process that produces groundwater can take hundreds of years to replenish. Learn more about Texas groundwater in the resource linked below.

### INSTRUCTIONS

1. Ask students to predict how much water they use in a school day.
2. Tell students that they'll monitor their water use over an entire day, recording the number of minutes (or times) that they use water - both at school and at home.
3. The next day, have students calculate the rate at which water comes out of water fountains and sinks (time how long it takes to fill a known volume and convert to gallons or liters) and complete the data chart from the previous day. Below are some typical water uses that may be helpful:

Toilet	1.6 gallons per flush (low flow) or 3.5-7 gallons conventional
Washing Hands	.5-1 gallon (water off while lathering) or 2-5 gallons (water running)
Water Fountain	.25 gallon
Brushing Teeth	.25-.5 gallon (water off except for rinse) or 2-5 gallons (water running)
Shower	2.5 gallons (low flow) per minute or 3-8 gallons (conventional) per minute

4. Have students brainstorm a list of ways to reduce daily water use and create an infographic to share their ideas.

### ADDITIONAL RESOURCES

Explore the Forest for the Trees Texas Connection from PLT:

[http://www.plttexas.org/uploadedFiles/Websites/PLT\\_Texas/Content/Texas\\_Connection/Activity%2038%20Every%20Drop%20Counts.pdf](http://www.plttexas.org/uploadedFiles/Websites/PLT_Texas/Content/Texas_Connection/Activity%2038%20Every%20Drop%20Counts.pdf)

Explore the Forest for the Trees Additional Resources Guide from PLT:

<https://www.plt.org/activity-resources/prek-8-activity-38-every-drop-counts/>

Download the Student Water Use Chart (English and Spanish) from PLT:

[https://www.plt.org/wp-content/uploads/pdf/PLTPreK-8\\_Activity-38\\_Every-Drop-Counts\\_Student-Page\\_Water-Use-Chart-1.pdf](https://www.plt.org/wp-content/uploads/pdf/PLTPreK-8_Activity-38_Every-Drop-Counts_Student-Page_Water-Use-Chart-1.pdf)

[https://www.plt.org/wp-content/uploads/pdf/PLTPreK-8\\_Actividad-38\\_Pagina-del-estudiante\\_Cuadro-de-los-Usos-del-Agua.pdf](https://www.plt.org/wp-content/uploads/pdf/PLTPreK-8_Actividad-38_Pagina-del-estudiante_Cuadro-de-los-Usos-del-Agua.pdf)