



## Water Quick Start Guide

### Home Energy & Water Evaluation Kit

#### Lesson Background Reading

Water is all around us. Almost 75% of the world's surface is covered by water. Florida is a peninsula, with every side, except one, surrounded by water. We use water for cleaning, having fun outside, drinking, and growing crops. However, of all the water on Earth, less than 1% of it is available, fresh water. This means each person needs to use water wisely at school and home to help ensure everyone has access to clean water.

#### Perform a Home Water Audit

On the next page are instructions for using the Home Energy & Water Evaluation Backpack Kit that is free for checkout from any Jacksonville Public Library, just like a book. You will go on a scavenger hunt, looking for water leaks and discovering how much water you actually use in your daily activities. The amount may surprise you.

#### End of Activity: Follow-up Question

From what you learned doing this activity, what step or steps will you take to use water better in your daily routines?



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### Home Energy & Water Evaluation Kit

#### A. Check for water leaks

1. With the help of an adult, make sure all the water is turned off inside and outside! Don't forget the icemaker!
2. Walk outside with an adult and have them open the lid of the water meter. A water meter measures how much water is used in your home.
3. **Is there a dial spinning on the meter?** \_\_\_ Yes \_\_\_ No
  - a. **Yes:** There may be a leak. Check to make sure you turned off everything! Still spinning? It's time to find the leak!
  - b. **No:** Good work- no water leaks!

#### B. Is your toilet extra thirsty?

1. Pour a glass of ice tea in your **toilet tank** (the back part with the handle) and **don't flush! Come back in 10 minutes.**

This step will allow you to see if you have a small leak.
2. 10 minutes later: What color is the water in the toilet bowl?
  - a. Select a Color- \_\_\_ Clear \_\_\_ Light Brown \_\_\_ Medium Brown \_\_\_ Dark Brown
  - b. **If you found:**

**Clear Water:** No leak! Your toilet is working well!

**Light to Dark Brown Water:** You have a leak. Share this finding with an adult.

(Special Note for Adults: If the tea seeped through into the bowl, you may have a leaky toilet flapper. These are inexpensive to replace and can save lots of water and money!)

#### C. Drooling Faucets

1. Walk around your home. Are there any sinks with faucets dripping water when no one is using them? \_\_\_ Yes \_\_\_ No
2. Find a leaky faucet? (Pull out the drip gauge from the backpack kit.)
  - a. Put the drip gauge under the leaky faucet.
  - b. Leave it for 5 seconds.



Drip Gauge

- c. Remove it.
- d. Find “GPY” on the drip gauge. This stands for “Gallons Per Year” of water that is lost because of the leak. Find where the water level is in the “GPY” column and record here: \_\_\_\_\_ GPY. A small leak adds up!

### D. Fully Flowing Fixtures



When you use your kitchen or bathroom faucet, or turn on your shower in your bathroom, a certain volume of water comes out, depending on how open you turn the water fixture. The amount of water that comes out is measured in **gallons per minute or GPM**.

1. Obtain the flow bag from the backpack kit.
2. Hold the bag around the kitchen or bathroom faucet. Turn the faucet on to the normal flow you use. Hold the bag there for 5 seconds.
3. Turn off the water.
4. Observe where the water is on the chart on the flow bag. \_\_\_\_\_ GPM
  - a. Was it above the efficient line? \_\_\_\_\_ Yes \_\_\_\_\_ No
    - i. **If Yes.** Your family may want to consider a faucet aerator. An aerator, a device that screws onto the faucet, adds air to the water flow, keeping the water pressure high and decreasing the volume of water coming out. A great, inexpensive way to conserve water!



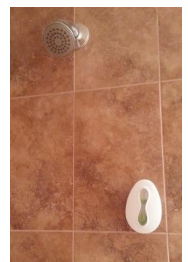
Flow Bag

### E. Rub-a-Dub-Dub

The average shower lasts 8 minutes.

1. Look at the flow bag and determine the efficient flow rate for a showerhead. \_\_\_\_\_ GPM
2. If someone reduced their shower time from 8 minutes to 5 minutes, how many gallons would they save? \_\_\_\_\_ gallons saved

**Show your work here:**



3. During your next shower, either use the kit’s shower coach (plastic hour-glass timer set for 5 minutes) or a watch and time yourself. **How many gallons of water did you use?**

$$\frac{\text{_____}}{\text{Shower Time}} * \frac{\text{_____}}{\text{Flow rate (GPM)}} = \frac{\text{_____}}{\text{Gallons used}}$$