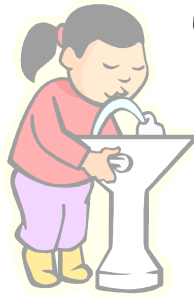


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How much water do I use?

First Grade



Enduring Understandings:

Water exists and serves many functions in our homes, schools and neighborhoods.

All living things need to take in water.

NYS Standards:

Standard 1 (Analysis, inquiry and design):

- M1.1c Apply mathematical skills to describe the natural world.
- S2.3b Record observations accurately and concisely

Standard 4 (Science)

- 7.1a Humans depend on their natural and constructed environments.

To build on their Kindergarten experience of learning *where* water exists in the school and schoolyard, now they begin to think about *how much* water they use from these places.

Setting: School and home

Duration: 20 minutes on a Friday and 45 minutes on the following Monday

Materials you will need:

One cup
One bucket
One gallon jug
A picture of a bathtub
Tally sheets (2 versions included, or you can make one with students)

Setting up the lesson

If students have not yet conducted a home water inventory, begin by asking them to tally the sources of water in their home. Please refer to the “water seekers” lesson for Kindergarten students for this simple procedure.

Lesson

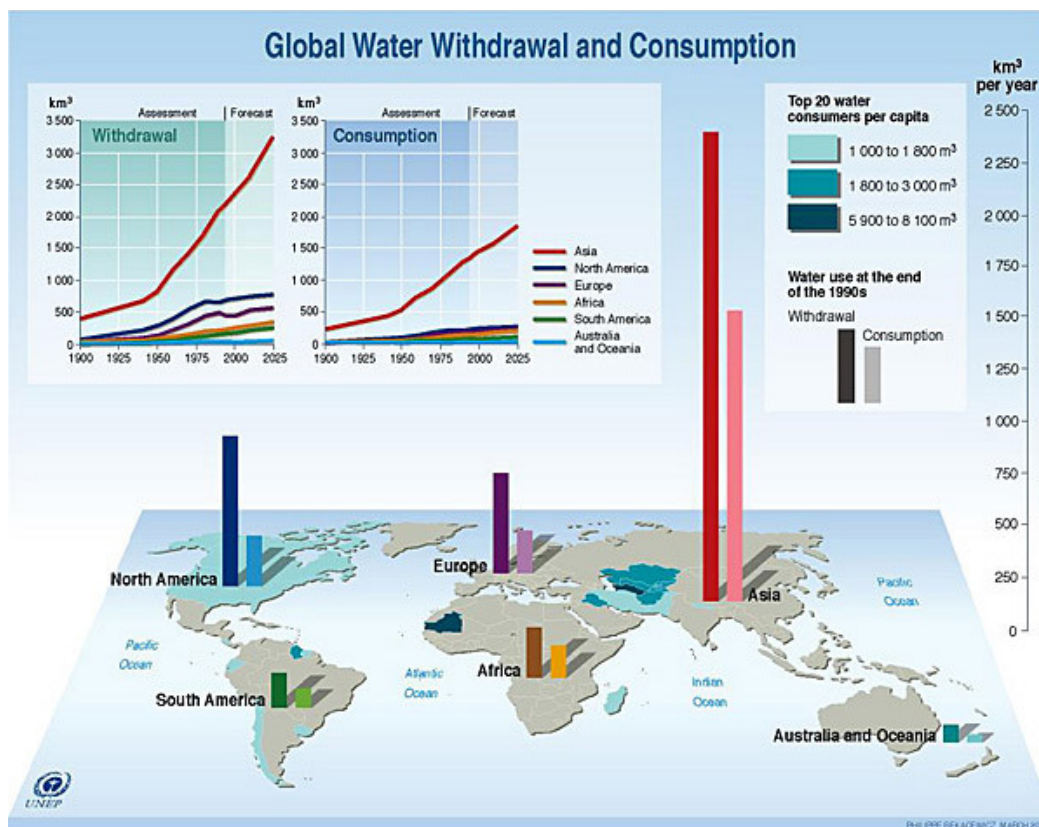
1. Begin by asking them to use the information they collected about water sources at home to think about all the ways they use water in a day. Make a class list of all the water uses in their home.
2. Using this information create a tally sheet that each student will use for one weekend at home. They will make a check mark each time they do each activity that uses water. Alternatively, you can use the sheet on the following page. Use the cup, bucket, gallon jug and bathtub picture to give them an idea of how much water each container holds.
3. Remind them that their scientific question is “How much water do I use in one weekend?” and that scientists only write down data that they actually observe. If a scientist were to make up

data, they would not be doing science! You may want to send a simple note home to parents so that they help the student complete this task. Students can also practice this for one day in class, in order to familiarize themselves with the data sheet.

4. After the weekend, create a class tally sheet for each category on an easel or board. This will give the class an idea of how much the entire class used in one weekend! Ask them to think about how much water they might use in a year! Or a lifetime!
5. Tell them that there is not an endless supply of water in the world, and that some people in the world do not have access to healthy water. What do you think would happen if you did not have healthy water to drink?
6. Help them come to the conclusion that it is important to conserve freshwater, and only use what we need. Then ask them to write small signs to hang at water sources in the school to remind students and staff that conserving water is important. Ask them to include data they collected in the small signs. If possible, laminate these signs and place around the school.

Relevant Data

- Over 1 billion people worldwide have no access to clean water within 15 minutes of their homes. (*Troubled Water* by Anita Roddick 2004)
- Daily indoor per capita water use in the typical single family home is 69.3 gallons. By installing more efficient water fixtures and regularly checking for leaks, households can reduce daily per capita water use by about 35% to about 45.2 gallons per day <http://www.drinktap.org>
- Some estimates, however, say that an average American could use up to 100 gallons, when they include water use outside of the house. <http://ga.water.usgs.gov>
- Farming is by far the largest use of water worldwide. <http://www.unep.org>



Source: Igor A. Shiklomanov, State Hydrological Institute (SHI, St. Petersburg) and United Nations Educational, Scientific and Cultural Organisation (UNESCO, Paris), 1999; *World Resources 2000-2001, People and Ecosystems: The Fraying Web of Life*, World Resources Institute (WRI), Washington DC, 2000; Paul Harrison and Fred Pearce, *AAAS Atlas of Population 2001*, American Association for the Advancement of Science, University of California Press, Berkeley.

Water Diary

























Where in the water cycle do you get your drinking water and how much do you use?

1. Interview adults in your school and home to answer these two questions

Where does the water in your school come from? _____

Where does the water in your home come from? _____

2. Track your water use for ONE day. Do not forget even one drop!

What time did you use it?	What did you use it for?	About how much did you use? (check the best answer)
		<input type="checkbox"/> about 1 cup  <input type="checkbox"/> about one gallon  <input type="checkbox"/> about one bucket  <input type="checkbox"/> about one bathtub 
		<input type="checkbox"/> about 1 cup  <input type="checkbox"/> about one gallon  <input type="checkbox"/> about one bucket  <input type="checkbox"/> about one bathtub 
		<input type="checkbox"/> about 1 cup  <input type="checkbox"/> about one gallon  <input type="checkbox"/> about one bucket  <input type="checkbox"/> about one bathtub 
		<input type="checkbox"/> about 1 cup  <input type="checkbox"/> about one gallon  <input type="checkbox"/> about one bucket  <input type="checkbox"/> about one bathtub 
		<input type="checkbox"/> about 1 cup  <input type="checkbox"/> about one gallon  <input type="checkbox"/> about one bucket  <input type="checkbox"/> about one bathtub 
		<input type="checkbox"/> about 1 cup  <input type="checkbox"/> about one gallon  <input type="checkbox"/> about one bucket  <input type="checkbox"/> about one bathtub 

Continue on the back of this paper

