



Science Unit: *The Earth Around Us: Air, Water & Soil*

Lesson: 11-2 *Tracking Water Consumption*

Extension

School Year: 2012/2013

Developed for: Queen Mary Elementary School, Vancouver School District

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Grade level: Presented to grades 4/5; appropriate for grades 1 – 7 with age appropriate modifications

Duration of lesson: This science activity on tracking water consumption will take 10 -15 minutes to introduce to students. At a later date, a follow-up discussion will enable students to share and evaluate results, and brainstorm ideas about water conservation.

Notes: This lesson plan is an extension of Lesson 11, What Happens to Water Before We Use It? in the science unit The Earth Around Us: Air, Water & Soil.
<http://scientistinresidence.ca/science-lesson-plans/the-earth-around-us-air-water-soil/>

Objectives

Students will gain awareness of their own water consumption, the importance of water conservation, and reflect on how their water consumption compares with people living in drought-stricken areas.

Materials

- Worksheet: Track your water consumption for one day.

Introductory Discussion

Begin with a discussion about water as a renewable resource and why it is important to protect our fresh water. Encourage students to estimate how much water they use each day, then talk about the different things we use water for. Brainstorm other possible uses of water. Then handout the worksheet and have everyone commit to tracking their water consumption for one day on a specific date.

Closure Discussion

Review the results of the tracking water consumption for a day exercise as a class. Discuss the highest and lowest values for different activities, and how water consumption could be reduced. What would they do differently if they lived in a country with little or no access to clean drinking water?

References

1. Google `water consumption` and you will find numerous websites. <http://ottawa.ca/en/residents/water-and-environment/drinking-water-and-wells/water-consumption> shows consumption by province.



SCIENTIST IN RESIDENCE PROGRAM

TRACK YOUR WATER CONSUMPTION FOR ONE DAY

Scientist: _____

Do your best to estimate the amount of water you use. Some approximate estimates of the amount of water used in different activities are listed below.

Activity	Number of times or minutes you did this activity	Average amount of water used	Total amount of water used per day	Total amount of water used per year
Drinking				
Flush toilet				
Wash hands				
Wash food before eating				
Shower (pay attention to how long, in minutes)				
Wash dishes or dishwasher				
Laundry				
Bath (how long did you run the water for?)				
Wash other objects (car, bike etc.)				
Total volume of water used per year				

The amounts below are approximate:

1 glass of water = $\frac{1}{4}$ litre (l) Running the tap (eg. toothbrushing, handwashing) = 13 l/min

1 toilet flush with a new low-flush toilet = 6 l, flush with an older more common toilet = 25 l

1 min shower with a new shower head = 11 l/min, 1 min shower with an older shower head = 18 l/min

1 load laundry with a new machine = 100 l, load with an older machine 200 l