BLM 5B *Student Resource*

**Grade 4/5, Comparing Water Costs**

Comparison of Water Costs With Savings at Home

Exercise #1

Look at the data collected by the Phillips family about their water consumption use over one year. Divide this by 52 weeks in a year to determine the approximate water usage in one week. Note that there may be differences in water consumption in summer and winter months.

A) In week one, the Phillips family used approximately \_\_\_\_\_\_\_\_\_\_ m3 of water per year. At the average cost of water in Canada at $ 0.31 per m3, what was the cost of water the Phillips family used in week 1? (Multiply the amount of water used in m3 at the rate of $ 0.31 per m3.)

The Philips family’s water consumption is\_\_\_\_\_\_\_\_\_\_\_\_\_ per week

B) What is your family’s water consumption from the *Home Water Works* (http://www.home-water-works.org/calculator) water calculator?

My family’s water consumption is\_\_\_\_\_\_\_\_\_\_\_\_\_ per week.

C) Image that your family made changes to their water use habits by running only full loads of laundry or dishes in the dish washer, repairing a leaky tape, turning the tap off while brushing their teeth, using a rain barrel instead of water from the tap or the similar water conservation practices. Reinsert the values for some of these practices in the water calculator (e.g. 5 loads of laundry instead of 7). What is the result in doing so?

My family would consume approximately \_\_\_\_\_\_\_\_\_\_\_ m3 of water per week.

What was the cost in per year of water? It is\_\_\_\_\_\_\_\_\_\_\_\_.

What was the cost in per week of water? (Multiply the amount of water used in m3 at the rate of $ 0.31 per m3.) In this case it is \_\_\_\_\_\_\_\_\_\_\_\_\_

1. Use your problem solving skills to determine how much money was saved by employing water conservation practices? Show all of your work on the back of this sheet of paper
2. Compare your findings with two of your peers.

Comparison of Water Use in Ontario With Another Province

In pairs:

Refer to the graph in the site:

A) What is the cost of water per m3 in New Brunswick? \_\_\_\_\_\_

What is the cost of water per m3 in Ontario? \_\_\_\_\_\_

Who pays more? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wise Water Use
<http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=F25C70EC-1>

B) How much water do we use in Ontario compared with the water used in New Brunswick per capita (per person)?

Ontario: \_\_\_\_\_

New Brunswick: \_\_\_\_\_\_\_

Who uses more?: \_\_\_\_\_\_\_\_\_\_\_\_

<http://www.ec.gc.ca/doc/publications/eau-water/COM1454/survey2-eng.htm>

Comparison of Water Costs In Ontario With Other Countries

In pairs:

A) Refer to the graph in the site:

Wise Water Use
<http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=F25C70EC-1>

What is the cost of water per m3 in Italy? \_\_\_\_\_\_

Calculate what the cost is in for a family in that country with the same use as the Phillips family in Week 1 at $ 0.31 per m3. Calculators may be used.

What is the difference between what they pay in their country to use the same water amount as what we do in Canada at $ 0.31 per m3? Calculators may be used.

B) Look at the following Graph:

<http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=F25C70EC-1#granted>

How much water do we use in Ontario compared with the water used in Belgium per capita (per person)?

Who has the greater incentive to be more conservative with water use to save money?

Class discussion:

Read the following web page, which is a message from Gord Miller, the Ontario Minister of the Environment:

<http://www.eco.on.ca/blog/2012/03/19/discovering-ontarios-water-footprint/>

Refer to Gord Miller’s message in this site. Do you agree that we need to increase the price of water to get people to save it?

a) Do we waste it because we think we have lots of water and it is plentiful? Should we wait for costs to go up before conserving it?

b) Should we conserve water because it is the right thing to do for our environment and to keep our costs lower than others?

Major point:

It costs much more money in other parts of the world to use the same amount of water that we use. If the cost of water was greater than it is in Canada or in Ontario we may be encouraged to conserve water.