

The Water Trials

Activity Time: 1 Hour and 30 Minutes

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| TEACHERS: Read "Simply Water" on page 44 of The Peel Water Story book. |
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Objectives:

The Water Trials is a hands-on experiment designed to have the student look at how they use water and determine how they might use water differently if they lived in a developing country. The activity encourages the students to extend conservation efforts into their own homes.

Introduction:

Take the students outdoors and inform them that they are going on a trip. Where they ask? A far away country. Explain to them that you will all be transported not to a vacation paradise with sandy beaches and large hotels. Instead we are going to a small village outside a major urban centre where families live in poverty.

Take the students to an outdoor area that has been arranged to represent an impoverished household. Props may include simple furniture (perhaps hammocks strung from tree to tree) and some kind of simple roof that protects them from the rain. The kitchen is comprised of a cooking pot (hanging on a tripod) over a mock fire, a basin, and 2 buckets.

Materials:

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| ○ Worksheets 1 & 2 (below) | ○ Recipe for a meal |
| ○ pencils | ○ Large buckets (some filled) |
| ○ (dirty) baby dolls | ○ Artifacts for shelter |
| ○ Cups for drinking | ○ wash basins |
| ○ Soiled plastic dishes | ○ measuring cups |
| ○ Garden patch | ○ Dirty clothes |

Procedure:

1. Tell the students this is where they now live and they must adapt to their new surroundings. Separate the group into "families of four", (though in reality these families would likely be much larger). Have the families stake out their space under the shelter, and when they're ready they may begin their chores. Hand each group a bag/box with the following items inside:

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|----------------------------|--|
| ● Worksheets 1 & 2 (below) | ● cups for drinking |
| ● a dirty baby doll | ● recipe for a meal |
| ● dirty clothes | ● garden patch (located next to the shelter) |
| ● soiled plastic dishes | |

2. Tell the students that people who live in other areas of the world use water very differently from Canadians. Many do not have the luxury of turning on a faucet to have fresh drinking water. Many do not have bathrooms but must depend on water that is hauled from several miles away to take a bath. Tell the students they must ration the water they are given and that they must fulfill all of the chores for that day. They are to figure out ways to use the water most effectively and efficiently. One student in each family of four should be assigned to record on Worksheet 1 the amounts of water

required for every use. Because the students are using real articles, they will have a better perspective of the amount of water it takes to perform a chore.

3. They are given the following list of chores to complete:

- the dishes must be cleaned
- the garden must be watered
- there must be drinking water for the family
- they must wash the baby
- they must wash the clothes
- they must prepare a meal
- they must bath themselves

4. Students are given a large bucket of “fresh” water and a second bucket for wastewater. They are also provided with a basin to use for each chore independently so as to not use all the water at once. For example, if they wash the baby in the basin using as little water as possible, they may then put the water into the waste bucket (where it is gone forever) or they may use it for something else, like washing clothes or watering the garden. They are given a measuring cup by which to keep track of the amount of water they have allotted to an activity. The recorder must account for every drop used on *Worksheet 1*. After they are finished the activity they are to tally up the total amount of water they used for one day.

Now have all students complete *Worksheet 2* where they'll find the typical daily amounts of water used by a Canadian family. Ask them to compare the quantities of water used by their actual family with the family they role played.

Debrief:

- Did the group manage to perform all the chores with the limited amount of water they had?
- Which of the tasks would the students rate as being the most important if they had even less water? (make sure the students have allotted enough water for drinking in order to sustain the body)
- Is it possible for water to be used more than once? (i.e. sharing water for baths, or “greywater”: same water for multiple different uses)
- Is there a big difference in the amount of water your role played “family of four” uses compared to the amount of water you might use at home? Give examples.
- As an extension try doing the other Peel Water Story activities: “Home Water Audit” or “School Water Audit.”

Source: Adapted from Water Environment Federation's “Waste Not, Want Not”

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WORKSHEET 1

Water Trials Data Sheet

Use the table to record how you use your water during the Activity. Remember you must try and complete all of the following jobs:

Dishes cleaned, Garden Watered, Wash the baby, Wash your clothes, Prepare your meal, Bathe yourself, Have water to drink.

Carefully choose the order you will do the jobs and decide when water is wasted or it can be used again for different jobs.

| Job (e.g. Wash dishes) | Amount of water used | Amount of sent to the waste bucket | Water reused for | Amount of water reused |
|------------------------|----------------------|------------------------------------|------------------|------------------------|
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Follow-up Questions:

1. Which task did you rate as the most important use for your water?
2. Which task did you think was least important?
3. Does your family at home use water in the same way as you did in this activity? Give some examples.

WORKSHEET 2

How much water do you use each day? A Water Audit.

Record in the table how many times people in your family do each of the activities. Calculate the volume of water used for each activity and the grand total for your home.

| Activity | Volume (litres) | Times/day | Total Used |
|---|-----------------|-----------|------------|
| Toilet Flushing | 20 | | |
| Short Shower | 100 | | |
| Brushing teeth | 5 | | |
| Washing dishes in the sink | 40 | | |
| Washing dishes leaving the tap running. | 110 | | |
| Using the dishwasher | 75 | | |
| Doing laundry | 150 | | |
| GRAND TOTAL → | | | |

To calculate the average volume used per person divide your grand total by the number of people who live in your home.

The answer is: _____

1. In your home where does you family use the most water?

2. Are there other uses of water around your home not included in the survey?

3. List three ways you can reduce the amount of water you use in your home.
