



Pioneer Water Race

This activity center is part of the **Water Attitudes** theme.

What's the purpose of this activity?

This activity illustrates how difficult it is to haul water. It is intended to encourage students to appreciate the fact that we have water piped directly into our homes, schools and businesses and to have them rethink taking clean water for granted just because we have easy access to it. Ensure that students understand the key terms **highlighted** in the activity by using them in several different contexts throughout the presentation.

Key messages:

- We tend to take water for granted because it is always there when we turn on the tap
- However, water is a limited resource that is essential to life
- We must use water wisely.
- Our use of water has changed
 - For example, we now have electricity and electricity can be made using water

Materials:

- 4 old fashioned wooden buckets with 2 yokes
- 2 large metal containers to hold water
- 8 plastic pails
- meter stick

Activity Set Up:

Place the metal tubs at the finish line of your race area, and the plastic buckets at the beginning. The wooden

buckets and yokes are just for show; place them near where you will be having your discussion.

What will I be doing?

You will be facilitating a discussion about water usage and the pioneer times (1750-1850) and supervising the students while they do the relay race. You will also be posing and answering questions about water usage and pioneer times (1750-1850). The discussion is to be had before the race begins to maximize learning.

1. Have the students sit down so that you have their attention.

Q: What does the term **natural resource** mean?

A: These are things that humans take from the natural environment e.g., water, wood from trees, rocks and soil, to use for our needs in life.

Q: What would some examples be of natural resources that pioneers used? Encourage imaginative answers.

A: They used wood for building and for burning fires to keep warm and cook with. They used soil for farming and they used grass for their animals to eat. They used water for drinking and cooking with and for cleaning themselves and their clothes and homes.

Q: Do we use water for the same purposes today?

A: Yes.

Q: What are some other ways we may use water that the Pioneers did not?

A: Heating homes (hydroelectricity), washing machine for clothes (hot water, electricity), dish washer to wash dishes (hot water, electricity), lights (electricity), etc.(Encourage answers)

Q Can we live without clean water?

A: No.

Q: *How do we make sure we have enough clean water?*

A: It is important to conserve water, not waste it.

Q: What are some examples of wasting water, and how can we change the activity to conserve more water?

A: Washing driveways with a hose (use a broom instead), leaving the water running while you're brushing teeth (turn it off while brushing), running the sprinkler during the day (which causes evaporation and runoff on sidewalks and down the sewer – run them in the evening, or not at all).

Q: *Could pioneers live without clean water?*

A: No, their communities relied on a source of clean, fresh water.

Q: *When we want water at home, what do we do?*

A: Just turn on the faucet. It's easy to get.

Q: *If kids wanted water in pioneer days, what did they do?*

A: They had to get it from a rain barrel outside the house that collected water when it rained, or they had to go to the river or an outdoor well and collect it with a container like a bucket.

Q: Do you think that was easy to do? Would you want to do that every day? What do you think pioneer kids would say if they could see the way we get water out of taps now every day? Listen to their answers.

Q: *How much water does the average Canadian, just like you and me, use every day?*

A: Each Canadian uses 340L of water every day! That's more than 5 bathtubs full of water! In Europe, they live like we do but they use only 140L of water a day. In many places all over the world people do not even use 100L of water for each person each day. Canadians have become water wasters!

- Direct the student's attention to the big metal tubs of water. Explain that every day each of us uses enough water to fill those two tubs, plus 3 more!
- That's a lot of water.
- In Europe, they would only use those 2 tubs plus a half a tub more. We know that water is easy to use--and easy to waste--because it comes out of the tap. We are going to see how hard it is to haul enough water for just 1 tub of water, not the whole 5 tubs of water we normally use in one day for only one person.

- Show the students the old-fashioned wooden shoulder yokes that pioneers would wear over their shoulders for carrying buckets.

Q: *What natural resource is this made out of?*

A: Trees, for wood. Let the students try wearing it.

Q: Do you think it is *heavy*?

A: Yes.

Q: *Are the buckets heavy?*

A: Yes, they are.

**Please note that these buckets are just for show; you should have enough plastic buckets for the kids to actually use for the activity. **

- Explain the activity as a race. Have the students use one bucket at a time. You can either time the race to see who has filled the empty tub with the most water at the end of the designated time (between 3-5 minutes) or you could have each student go once and time them to see who finished fastest and who had the most water. Everybody can take turns running and carrying buckets one at a time or they can form a "bucket brigade" line to hand the buckets across. Walking and physically hauling the water is more realistic but also more tiring.
- After the race is over, wait until the water in the tub has stopped moving. Use the meter stick to measure the depth of water in the tub.

Q: *Is it a full tub?*

A: No, it isn't. Imagine if you each had to fill 5 tubs for each person in your family all by yourself.

Q: *Would it take you a long time?*

A: Yes, it would, and you would still have to help with other chores at home.

Now that we have tried hauling water, there are some things to remember:

1. First, we would have to walk all the way to the well to get the water, and then all the way back carrying the full buckets. Here we are only walking a short distance from one tub that we used as our well to the other tub that we pretended was the water supply for our house.
2. We all helped each other to haul this amount of water, right? In pioneer days, kids like you would have to haul all the water all by yourself for your family's needs.

3. We only did this for 1 tub of water; imagine doing this for 5 tubs every day!

4.

Recap that they did a good job and to remember how hard it would be get enough water for their families if it wasn't piped into our homes and to think about how much water is in 1 tub next time they are using water. Try to imagine cutting down from 5 tubs a day to only 2 tubs by saving water whenever possible.

Be a water watcher, not a water waster!

Additional Background Information:

The way of life in pioneer times (1750-1850) and in the modern era is very different in several areas of life. (If you are knowledgeable about pioneer times then you may want to make other comparisons between 19th century communities and modern ones.)

- Physical differences such as buildings: number, construction, function. e.g. schoolhouse, houses, etc.
- Economic practices: blacksmith, farmer, miller, etc.
- Home life: cooking, chopping wood, cleaning, tending animals, etc.
- Social life: children of all ages attending the same school, if they went at all; being able to read and write.
- Games, toys, clothes and entertainment they had.
- Responsibilities: such as chores and taking care of younger brothers and sisters, life with extended family, etc.

Electricity is now used to do many things that Pioneers did by hand or other means. Electricity is produced by turning a turbine and causing electrons to move within wires, electricity. These can be done by using (hydro) water (hydroelectricity), nuclear, natural gas, coal, wind.

Clean Up Procedures:

Compile everything together, and return the STOPWATCH if it was borrowed!