Lather Up!

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

What's the purpose of this activity?

To illustrate how we take for granted hot, running water that we use for showers and to show how to conserve water when showering.

Key messages:

- We have a limited amount of water that is drinkable and we must learn to conserve it.
- Pioneers used water much differently than we do today. We are more wasteful.
- There are ways in which everyone can conserve water and energy (Electricity and Electrical Devices 1.2)
- All showers should be retrofitted with water-saving showerheads and we should take shorter showers.

Materials:

- 2 shower stalls, 2 buckets
- 2 hoses
- splitter (Y-shape)
- large ponchos with hoods, rubber boots

Activity Set Up:

Set up the shower stalls next to each other. Connect the splitter to the hose and connect that to the shower stalls. Place the buckets under the shower drains.

What will I be doing?

You will be explaining the difference between old-fashioned bathing equipment and certain modern ones (stand-up shower stalls). As well, you will be teaching the students that not all modern plumbing devices are equal. We waste a lot of water when showering. We can decrease this waste by using a water-saving showerhead.

1. **When the students get to the station, have a discussion using the following questions and answers, along with other information to facilitate this.**

Q: Through a show of hand, how many of you had a shower yesterday? How many of you had a bath?
A: In pioneer days, about 150-200 years ago, people used to have to take baths in a bathtub.

Q: Where did their water come from?
A: They used to have to haul the water from the town well, from a pump in the ground that was pumped by hand or from a river or lake.

Once you have the water, it would be cold and they would have to heat it. Sometimes they would heat it on a stove, but you would still have to build a fire to light the wood stove and wait until the water was warm. It would take a long time to heat enough water to fill a bathtub just once. How about if everybody in the family had to have baths, that's a lot of water to haul and heat, isn't it?

Q: What happens to the water after we are finished in the bath or shower?
A: We just pull the plug and the water goes down the drain. They didn't have drains back then so what did you do with their water back then? After your bath, you had to carry the used bath water back outside to drain it! That's a lot of work! Back in pioneer days, most people only had a bath once a week, on a Saturday night.

Q: Does anybody know why it would be on a Saturday night?
A: (If they have been to the activity center "Doing the Laundry" they will know why.) That's because on Sunday they would wear their "Sunday Best" clothes to go to church and they would want to be clean.

Nowadays, most of us bathe more than once a week. Imagine if we had to haul the water and heat it up very time we wanted to take a bath and then carry it back outside to pour it out.

Q: If we had to do all this for a bath would we take a bath every day?
A: No, it would be a lot of work. Lucky for us, we have water that is piped into our homes and is heated up before it comes out of the tap.

Q: What do you think kids who lived in pioneer days, 150-200 years ago, would say if they could see the running water we have now? Encourage the students to give creative answers.

Q: Does anybody know how much water the average person uses during a 5-minute shower?
A: 15-20L per minute means that most people use at least 75-100L per shower. In fact, 35% of all the water that we use in a house each day is for showers and baths.

Q: Does anybody know how much water the average Canadian, just like you and me, uses each day for everything?
A: 340L, that's enough to fill 5 bathtubs full of water! In Europe, people live like we do, but each person only uses 140L in a day.

Q: What can we do better? Have the students come up with some ideas.

Sometimes it's easy to waste water because it's so simple and inexpensive to get. We just turn on the tap and it's there. But we need to save water.

Q: What are some reasons why we should save water?
A: We will run out of clean water because it's very easy to make water too dirty for us to drink and wash with and it is very expensive and takes a lot of energy to clean it again. If we use too much, there is none for animals and plants in their natural ecosystems, etc.

Q: How does energy make the water hot for us to shower?
A: The hot water tank in our houses is powered by electricity, natural gas, or oil. The electricity heats an element, while the gas and oil is burnt. The heat produced from the fire is transferred into the water making it hot.

Q: How is electricity produced in Canada?
A: Electricity is produced by turning a turnbine which causes electrons to move within wires. These turnbines can be turned using water (hydroelectricity), nuclear, natural gas, coal, wind.

Q: What are some ways you can save water?
A: Turn off the taps when brushing teeth, don't wash off driveways with a hose, don't run the sprinkler during the day when most of the water will evaporate, fix leaky faucets, take shorter showers, don't wash your driveway with water, etc.

Another way to save water inside your home is to use a low flow showerhead. Let's see the difference between a regular showerhead and a low flow one. Is this a good way for us to reduce the amount of water that we use so Canadians stop becoming water wasters? Yes! They can suggest other ways, too.

2. **Have 2 students put on raincoats and one stands in each shower stall. A volunteer runs the two showers for 1 minute each, timed by a stopwatch. There is NOT enough time for every student to try the shower. Compare how much water was collected.**

Q: Which shower used more water?
A: The regular showerhead used more water. By using a low flow shower head (only 9.5L or less per minute), we save almost 50%.

- Regular shower head 15-20 L per minute
- Low flow shower head 9.5 L per minute

A savings of up to 50 L per shower or 350 L per week per person if you shower every day.

Additional Background Information:

Recent changes to plumbing codes in Canada mean that in the near future water-waster showerheads will no longer be sold. Low flow showerheads & low flow toilets will then be the only ones sold.

Some municipalities will retrofit your home for free. This means that they will replace existing fixtures (like shower heads and toilets) with water-conserving versions to help you save!

Contact your local municipality to find out how you can change over to water saving devices.

Clean Up Procedures:

Place all materials in the activity crates provided. If the shower stalls are dirty, rinse them out in order to leave them clean for the next day.