

Environmental Education: **Drinking Water and Being Water Wise**

Where does our drinking water come from? (Elementary)

Background Information

Depending on where you live in the capital region your water may come from a variety of sources. Residents may receive their household drinking water from the Greater Victoria Drinking Water System, smaller regional water systems or private wells.

The Greater Victoria Water System provides drinking water to the majority of residents. This water supply relies mainly on precipitation (rain) to replenish and fill up our surface lakes or reservoirs. The amount of rain we get varies season to season and year to year. Reservoirs allow us to store water to be used when we do not have consistent precipitation. In the winter we have lots of rainfall which is collected to fill our reservoirs. Once summer arrives we receive significantly less rain and start to use the water that had been collected and stored from the winter rains. The drop in precipitation in the summer is not the only challenge. Due to warmer weather and drier conditions, we see an increase in overall water use, especially outdoor water use. In the summer, we tend to drink more, bathe more, use pools, water lawns and gardens, as well as many other behaviours that come with warmer, drier weather.

In general, the more aware we are of how and where we use water, the better able we are to protect and conserve our water supply. When we consider all the ways we use water and are mindful to use water wisely we avoid wasting water unnecessarily. The more water in our reservoir, the easier it is to maintain high water quality, and ensure we are prepared for any seasonal abnormalities.

These activities will draw attention to different ways we use water, common ways water is used inefficiently and things to keep in mind to help conserve drinking water.

Activity types in this lesson:

Warm-Up: Brainstorming

Video: Down the Drain and Back Again

Hands-On: Record your at home water use

Listening: Songs and Podcasts

Expand and Connect

Warm-Up

Brainstorm all the ways you use water. You can do this verbally or write the ideas down on a piece of paper. If writing your ideas down, highlight all the ways you use water inside your house in one colour and then use another colour to highlight all the ways you use water outside.

Video

[Down the Drain and Back Again](#) (16:06) - CRDVictoria YouTube

Learn about where the capital region's drinking water comes from and tips to use our drinking water wisely. Watch as Sprinkle, the water drop, teaches Dylan and Dana how to conserve water by turning them into water drops. Their adventures starts by going down the drain and flowing out to the ocean. There, the sun heats them up and they evaporate into the clouds. They then transform into raindrops and fall from the sky in to a creek that flows into the Sooke Lake Reservoir, where our drinking water is stored.

For suggestions on how to guide students through a prediction activity, as well as printable worksheets see [Lesson 2: Down the Drain and Back Again](#) from the Every Drop Counts learning resource.



Hands-On

Record your indoor water use at home.

Print off a CRD Weekly Water Use chart and post it in a common area such as on the refrigerator. Alternatively, take some time to make your own chart. You could make a poster chart, make a chart out of recycled materials, decorate it, and/or add your own categories of water use to monitor.

Complete the chart by marking it every time you use water. Examine your water use at the end of each day and at the end of the week. Where did you use water the most often? How did you use water that was not recorded on the chart? What are some ways could you conserve water?

Note: while brainstorming ways to conserve water, keep in mind that water use for health and hygiene is important. “Drink less water” or “wash hands less” are not ways we should be conserving water. Examples of ways to conserve water could be; only do full loads of laundry and/or dishes in the dishwasher, fill the sink to wash dishes instead of leaving the tap on, turn the tap off when brushing teeth or shaving, take shorter showers or showers instead of baths or only fill the bathtub part way.

Try it as a whole family. Do you all use water in the same way?

Listening

[Drip, Drip, Drop](#) song — CRDVictoria YouTube (2:19)

Learn a new water song! Listen and sing-along to this song about water conservation. For a full lesson plan see [Lesson 8: The Water Song](#) from the Every Drop Counts learning resource.

Podcasts

Brains On! — *An award-winning audio show for kids and families. Each week, a different kid co-host joins Molly Bloom to find answers to fascinating questions about the world.*

- The Wonderful Weirdness of Water (29:30) [<https://www.brainson.org/shows/2018/05/22/weirdwater>]
“In this episode of Brains On!, we explore some of the weird things water can do, like move against gravity! Or cut right through rock! We learn some of the reasons why water is so weird, and fill you in on how you can learn more about the water in your neighbourhood.”
- Water, Water Everywhere – But How Does It Get There? (21:16) [<https://www.brainson.org/shows/2014/07/08/water-water-everywhere-but-how-does-it-get-there>]
“It’s easy to take water for granted. After all, you just turn a faucet and it pours right out. But how does it get to our faucet? We’ll explore the water cycle from rain to your drain.”

Ear Snacks — *A musical podcast for kids about the world.*

- Rain! (20:00) [<https://www.earsnacks.org/episodes/tag/rain>]
“How do you know if it’s going to rain? Does anybody know? Andrew & Polly talk gumboots and galoshes with their friends.”

Peace Out — *Relaxation stories for kids.*

- Water Cycle (9:00) [<https://bedtime.fm/peaceout/s1e8-water-cycle>]
“Join us for a journey through the water cycle! We’re going to imagine ourselves as tiny drops of water falling from a rain cloud, rushing through a water fall, and evaporating back up to the sky. We’ll focus on breathing, gentle movements, and visualization for this short story.”

Pants on Fire — *Each week, a kid interviews two experts in a particular topic – one, a genuine, credentialed expert, the other a low-down dirty liar. Hilarious and fast-paced, the show encourages kids to teach themselves how to ask insightful questions, weigh the evidence before them, and when to trust their gut.*

- Toilets (19:00) Ep. #34 [<http://www.bestrobotever.com/pants-on-fire>]

Expand and Connect

Suggestions to expand learning and create connections.

- Use the printable characters and character masks from [Lesson 4: Dylan and Dana's Water Adventure](#) and have students create a puppet show or skit of another water adventure for Dylan, Dana and Sprinkle.
- Explore characteristics of water by performing some simple, at-home experiments. For example, if you listened to the Brains On! "The Wonderful Weirdness of Water" podcast episode, the episode mentions the Mpemba effect, which is the observation that warm water freeze faster than cold water. Try it yourself! Label two containers (ice cube tray or other plastic container), one "warm" and one "cold." Put warm water in the "warm" container and cold water in the "cold" container. Making sure you use the same type of container and the same volume of water. Put both containers in the freezer at the same time. Check them a few times throughout the day. Which froze first? Do you notice any other differences?
- [Lesson 5b: Forms of Water](#) and [Lesson 5c: Water Actions](#) from the Every Drop Counts learning resource has simple experiments and questions to guide students through a discussion about properties of water.
- Science World has published many activities and demonstrations to help students learn about water. See their [Kitchen Water Cycle](#) or [Cloud in a Bottle](#) write-ups as examples.
- Recreate "10 Amazing Experiments With Water" by Drew the Science Dude [<https://www.youtube.com/watch?v=CCxb1qRsWY>]

Still Curious?

Additional activities and information resources:

CRD Activities:

CRD [Every Drop Counts Educator's Resource](#)

Down the Drain and Back Again [Colouring Sheet](#)

Down the Drain and Back Again [Maze and Word Search](#)

CRD Information Resources:

[CRD Educator Guides and Resources](#)

[Sooke Water Supply Area](#)

[Weekly Water Watch](#) — Sooke Reservoir water levels

[Drinking Water Quality](#)

[Water Conservation in the Region](#)

If you have any questions about drinking water in the region, or are looking for ideas on how to connect this local topic with other learning opportunities, please contact us at education@crd.bc.ca.