

Grade 2

The Cycle of Water

Public Education and Outreach
peelregion.ca/enviroed



Teacher Note:

- In this lesson, students will learn about water and wastewater treatment, the water cycle, water efficiency and the importance of drinking tap water
- Handouts for this lesson
 - Exploring Water
 - All About Treatment
 - Water Promise
 - Classroom version
 - Take home version



Town of Caledon
City of Brampton
City of Mississauga



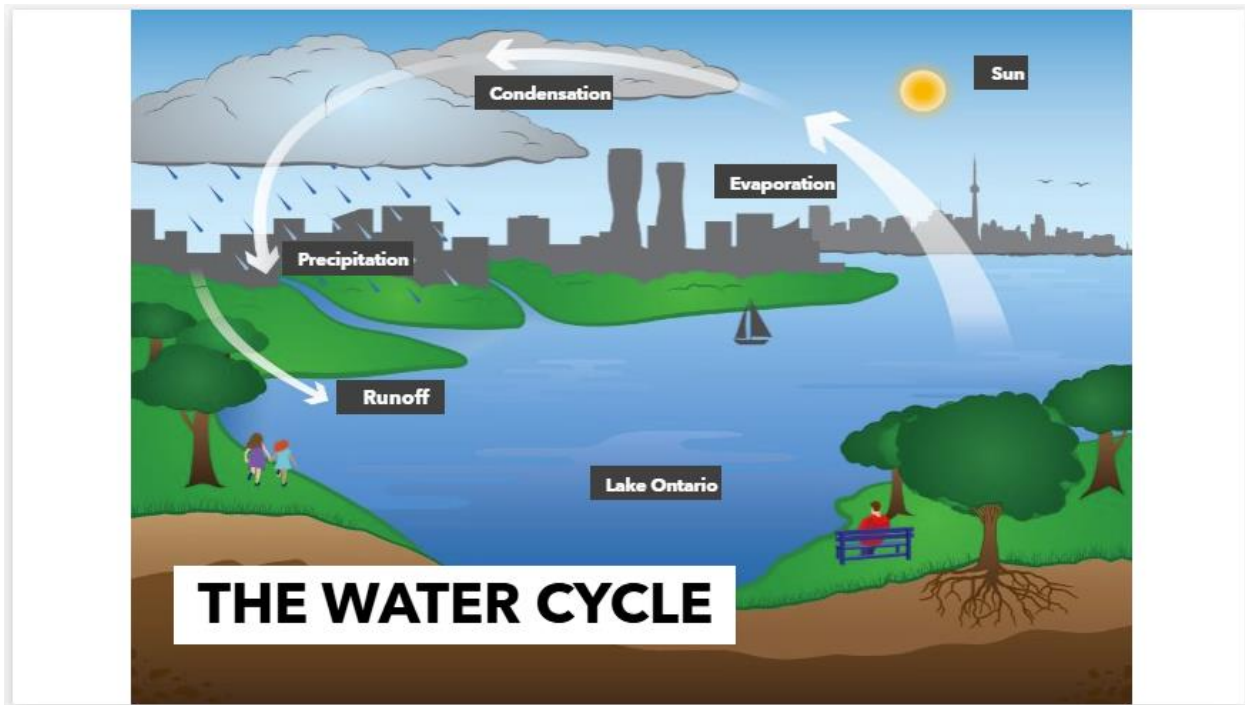
Teacher Note:

- **(Click-1)** Ask students - What city or town do they live in?
- Let students know the city or town they mentioned is part of a larger area that is called the Region of Peel
- The Region of Peel includes the Town of Caledon and 2 cities – City of Brampton and City of Mississauga
- Some of the programs and services that the Region of Peel provides to our communities includes:
 - **(Click-2)** Garbage, recycling and organics collection;
 - **(Click-3)** Maintaining regional roads, including snowploughing in the winter and paving in the summer;
 - **(Click-4)** Paramedics (ambulance)
 - **(Click-5)** Police
 - **(Click-6+7) Providing safe clean water to drink and cleaning the dirty water when you're done**
- Today, we are going to learn about how water is important to all living things, and how we use water everyday at school and at home



Teacher Note:

- Brainstorm with the class different ways they use water at home and at school. This can be done on chart paper or a board
- ****10-15 minutes to complete this activity****
- We use Water for....
 - At school
 - At home
- **(Click-1)** show different ways people use water after students create their list
- Let's count together how many ways we use water



Teacher Note:

- Depending if the unit has already been covered in class, the water cycle will be review, or something new to go over with the class:
 - Where do we in the Region of Peel get our water from?
 - Brampton, Mississauga and Bolton get water from Lake Ontario. Other people who live in Caledon get water from wells, either on their own property, or municipal wells that are owned by the Region
 - Water from Lake Ontario is fresh, which means that the water is not salty like the water in oceans and seas
- The water cycle is a continuous circulation of water from rivers, lakes and oceans into the atmosphere onto the land and back
 - **(CLICK-1) Sun:** the source of energy that drives the whole cycle
 - **(CLICK-2) Lake Ontario:** this is our water source
 - **(CLICK-3) Evaporation:** the sun heats up the water in lakes, rivers and oceans and turns it into vapour
 - **(CLICK-4) Condensation:** water vapour in the air gets cold and changes back into liquid form

- **(CLICK-5) Precipitation:** the clouds get heavy and water falls back to the earth in the form of rain, hail, sleet or snow
- **(CLICK-6) Runoff:** moves water across land and makes its way to the nearest body of water such as a lake
- **This process is called the natural water cycle. But humans also change the path of water**



Teacher Note:

- What happens when we use that water to brush our teeth, shower, go to the bathroom – where does it go?
 - **Ask:** Do we send it directly to the Lake?
 - **Answer:** NO
 - **Ask:** If I was thirsty, can I go down to Lake Ontario and take a cup of water directly from the lake and drink it?
 - **Answer:** NO
- Why not?
 - Have students share their responses (i.e. water is dirty, not treated, has pet waste, bacteria and germs)
 - The water in Lake Ontario might have bacteria, viruses, and germs in it. All those things could make us very sick if not treated. That is why we have to send the water to get treated so it can be cleaned and made safe for us to drink
- The next few slides will cover how we treat water and wastewater



Teacher Note:

- Go Noodle Water Cycle Video
- To play video, press the Play button
 - Feel free to get the class up and dance/move along to the actions of the song
 - Review the stages and terms of the water cycle
 - **Evaporation, Condensation, Precipitation**
 - Water is always moving around the earth in different states (liquid, solid, gas)
 - Explain the different states of water from the water cycle
- The water we use every day is the same water the dinosaurs used, so that means water is super old!

Dew's Water Adventure

<https://peelregion.vids.io/videos/ac9cd9b41d19e1c225/dews-water-adventure>



Teacher Note:

- Animated slides that will cover and explain water treatment
- Please click on the link on the slide to get to the video
 - <https://peelregion.vids.io/videos/ac9cd9b41d19e1c225/dews-water-adventure>

Discussion Questions

- Before playing the slides
 - Why does water have to be treated before we use it?
- All About Treatment worksheet: Have the students match the stages of water treatment while listening to the animated slides

Dew's Wastewater Adventure

<https://peelregion.vids.io/videos/069cd6b81717e3c58f/dews-wastewater-adventure>



Teacher Note:

- Animated slides that will cover and explain wastewater treatment
- Please click on the link on the slide to get to the video
 - <https://peelregion.vids.io/videos/069cd6b81717e3c58f/dews-wastewater-adventure>
- Have the students match the stages of wastewater treatment while listening to the animated slides (see All about water treatment worksheet)

Did you know?

- Did you know that we have over 200 dedicated staff in the Region of Peel who treat and maintain our water to make sure every time you turn on the tap, the water is fresh and healthy to drink?
- And every time you flush your toilets, or take a bath, staff also work to make sure that dirty water gets cleaned before putting it back to the lake

<https://www.tvokids.com/preschool/now-you-know-kindergarten/videos/toilets>



Teacher Note:

- Link to TVO Video: 'Where does our Water go when I flush the toilets?'
 - Please click on the link on the slide to get to the video
 - <https://www.tvokids.com/preschool/now-you-know-kindergarten/videos/toilets>

Discussion Questions:

- Why is it important that we treat the water we use?
 - Think of all the animal life that lives in the Lake
 - Would you swim or enjoy a boat ride in water that is full of stuff we pour down the drain? Would the animals enjoy it?
- Why should everyone be careful of what they pour down the drain?
 - We need to care and respect for the earth and that starts with taking care of our water
- When we pour harmful things down our sinks (oils, paints) this can cause negative impacts at our wastewater treatment plant, as well as pollute our water

Water Promise

At school:

I will turn off the tap when washing my hands at school

At home:

I will turn off the tap when brushing my teeth at home



Teacher Note:

- Have students complete the 'Classroom Water Pledge' or the 'Home Water Pledge'
 - Refer to Water Pledge handouts
 - **Classroom Water Pledge** – have all students sign their name and place near the classroom sink
 - **Home Water Pledge** – have student sign their name and have them get family member to place near their bathroom sink

Wrap up the lesson

- Ask students what they learned during this lesson