## What is Freshwater?

Freshwater is the clean and clear water that we can drink and use for lots of things like taking baths, watering plants, or filling up swimming pools. Freshwater comes from rivers, lakes, ponds, and even icebergs! It then makes its way to the taps in our homes - and unlike the ocean it doesn't taste salty. This is because freshwater only has tiny amounts of salt in it.

## Why Does Freshwater Matter?

### Drinking

Our bodies need water to stay healthy. Water helps us digest food, carry nutrients and oxygen to cells, and remove waste from our bodies.

### Eating

Freshwater is used to water the fruits and vegetables we eat, and to keep farm animals healthy.

### Cleaning

We use freshwater to bathe, shower, and wash our hands. We also use it to keep our homes, schools, and communities clean. This helps us fight off the germs that can make us sick.

### Helping our Planet

It's not just about us! Freshwater also supports many environments, plants, and animals. If we don't take care of our clean water sources, it will be tough for all living things to stay healthy.

## Freshwater Facts: Canada and Beyond

- About 12% (about 1 million square kilometers) of Canada is covered by freshwater. That's bigger than all of Ontario![1]
- There are about 2 million lakes and more than 8,500 rivers in Canada.[2]
- Canada and the United States share The Great Lakes, a huge freshwater system that has about 20% of the world's freshwater supply.[3]

Even though Canada is lucky to have a lot of freshwater, we can only easily use about 8%. The rest is deep underground or locked in ice and glaciers. We use water for so many things every day. Keeping it safe for drinking, eating, and cleaning takes a lot of energy. This is why it's so important we protect our freshwater systems and use the water we have wisely.

### Did You Know?

- Only 3.5% of Earth's total water is freshwater.
- Less than 2% of Earth's freshwater can be used as drinking water.
- The rest of Earth's freshwater is locked in ice and glaciers, or stored deep in the ground as groundwater.
- Freshwater is home to more than 100,000 species of plants and animals.[4]

## Dangers to Clean and Healthy Freshwater

There are many things that can make freshwater unhealthy or upset the plants and animals that live there. These things are called "stressors" because they add stress to the plants and animals and their environment. Some examples of these stressors are:

**Pollution from Industry:** Factories and industries sometimes release harmful chemicals, oils, metals, and other waste into rivers and lakes. These chemicals can make the water dirty and unsafe for plants, animals, and people to use.

**Invasive Species:** Some plants or animals have made their way into environments where they don't belong. One way that this happens is if a plant or bug is accidentally stuck to a person's shoes or the bottom of a boat when traveling from one place to another. When they enter freshwater areas where they shouldn't be, they can cause big problems by taking over and harming the natural balance of the ecosystem.

**Household Waste:** Sometimes, things we use at home, like plastic bottles or chemicals from cleaning products, can end up in rivers and lakes. This waste can make the water unsafe for animals and plants.

Something that adds even more stress to freshwater is **climate change**. Let's learn how!

## Climate Change and Freshwater

Climate change is a big challenge for the planet — and that includes freshwater! It can cause unusual weather like heavy rain or droughts, rising temperatures, and melting glaciers. All of these things can hurt freshwater systems. Some important examples are:

### Heavy Rainfall

- Heavy rain can cause disasters like floods and landslides. Floods and landslides can carry dirt, waste, and harmful chemicals into freshwater. This can pollute the water and make it unsafe.
- Many farms, parks, and even homes use fertilizer to help plants grow. When it rains a lot, the water washes away the fertilizer and carries it to a pond or lake. These fertilizers can make water plants like algae (AL-GEE) grow too much. Algae grows on the top of the water and blocks the sun from reaching the underwater plants and animals. This can kill off fish and make people who drink, fish, or play in the water sick.

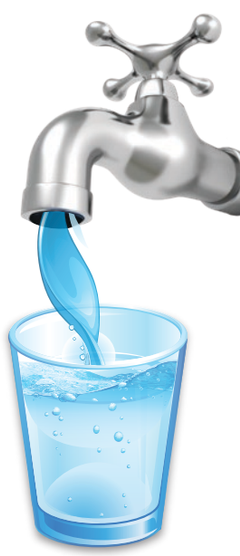
### Droughts and Wildfires

- Hotter temperatures can mean less rain and more evaporation from freshwater like lakes and rivers. This makes places very dry, causing droughts where there's not enough water for the plants, animals, and people that live there.
- Warmer temperatures can also lead to more wildfires that burn up plants and trees. The burned plants and trees can create ash and chemicals that wash into rivers, lakes, and ponds.

### Melting Glaciers and Ice Caps

- With rising temperatures, ice caps and glaciers melt and send more water into oceans. This makes the sea levels rise, which can affect freshwater areas near the coasts, making them too salty. Salty water is not good for drinking or growing food.

## Water as a Human Right



Water is very important for all people. The United Nations says water is a “human right”, meaning that all people should have clean water to drink. But, climate change and other big challenges make it harder for some people to have clean water.

Even in Canada, where we have lots of freshwater, there are many Indigenous communities that do not have access to clean drinking water. Communities like Little Pine First Nation and Oneida Nation of the Thames sometimes have to boil their water before using it to kill off germs.[5]

The good news: more people are learning about these problems and know that we have to fix them! Indigenous communities, scientists, and the government are working together to make sure everyone has clean water.

## We Can Help Too!

- **Save Water:** Be careful of water use at home. Try taking shorter showers, and don’t leave the tap on while brushing teeth.
- **Learn and Spread Awareness:** Learn about the importance of clean water and the communities without clean water in Canada. Tell your friends, family, and classmates. Awareness helps others understand why water protection matters.
- **Get Involved:** Help out with local clean-up events around water sources like rivers, lakes, or beaches.
- **Speak Up:** Write letters or draw pictures to local leaders or newspapers, sharing concerns about your local water systems. Sometimes small voices can spark big changes!

**Sources:**

[1] World Water Day... by the numbers, Statistics Canada

[2] Human Activity and the Environment: Section 2: Canada’s water supply—stocks and flows, Statistics Canada

[3] Great Lakes ecoregion, National Oceanic and Atmospheric Administration

[4] Freshwater Habitat, National Geographic

[5] Safe Water For First Nations, The Council of Canadians