Take a Water Audit

Use the following information to help you calculate how much water your family uses in one week.

In the average Canadian home, water used in the bathroom for showering, bathing and flushing toilets accounts for 65 percent of the total amount of water used in the household. Cleaning and doing laundry is another 25 percent while cooking and drinking uses only about 10 percent of the total water coming into a household. Just how much water does your family use in one week? What can you do to help conserve our precious water supply? Take this challenge to find out!

Water-Using Activity	Amount of Water Used Per Interval (A)	Total Time or Number of Times Used in One Week (B)	Total Litres Used (A multiplied by B)
Cooking	3 L per day for an average size family		
Drinking			
Washing Dishes by Hand	12 L per load		
Washing Dishes in a Dishwasher	40 to 50 L per load		
Laundry	210 L per load		
Shower	15 L per minute		
Bath	100 L per bath		
Flushing Toilet	19 L per flush		
Running Tap (brushing teeth or washing hands)	7 L per minute		
Running Garden Hose or Sprinkler	5 L per minute		

Note: These values are averages. Your water use might be higher or lower depending on the plumbing in your house.

Be a Water Wise-Guy (or Gal)

Your water audit will likely show some areas where you could reduce your water usage. Here are just a few ways that you and your family can easily conserve water in the home.

- Check your toilet for leaks. Put a few drops of food colouring in the tank (the back of the toilet). If, without flushing, any of the colour appears in the bowl, you have a leak. Repairing the leak can save you over 10,000 litres a year in wasted water!
- Changing the shower head to a low-flow alternative also saves water.
- Turn off the tap when you are brushing your teeth or shampooing your hair. Turn it back on when you are ready to rinse.
- Fix a slow leak from a tap. Leaks can result in a loss of as much as 22 litres of water in just one day!
- Give your car a sponge bath. Don't leave the water running while you are washing the car — you'll save hundreds of litres of fresh water!

Did you know…
More water is used during the summer than any other season, when one-half to three-quarters of the treated water is sprayed on lawns!

- Try not to water gardens and lawns during the day as most of the water will be lost through evaporation. Wait until sundown when the plants can use all the water you give them.

Did you know…
One gram (about the size of a pen cap) of 2,4-D (a common household herbicide) can contaminate 10 million litres of drinking water.

- There are many alternatives to harsh cleaning products and herbicides that are much less harmful to the environment and water. Ask your parents to buy products with the Environmental Choice logo when selecting cleansers and household chemicals.
- Instead of running the kitchen tap until the water is cool enough to drink, keep a pitcher of water in the fridge.
- Use dishwashers and washing machines only when completely full.

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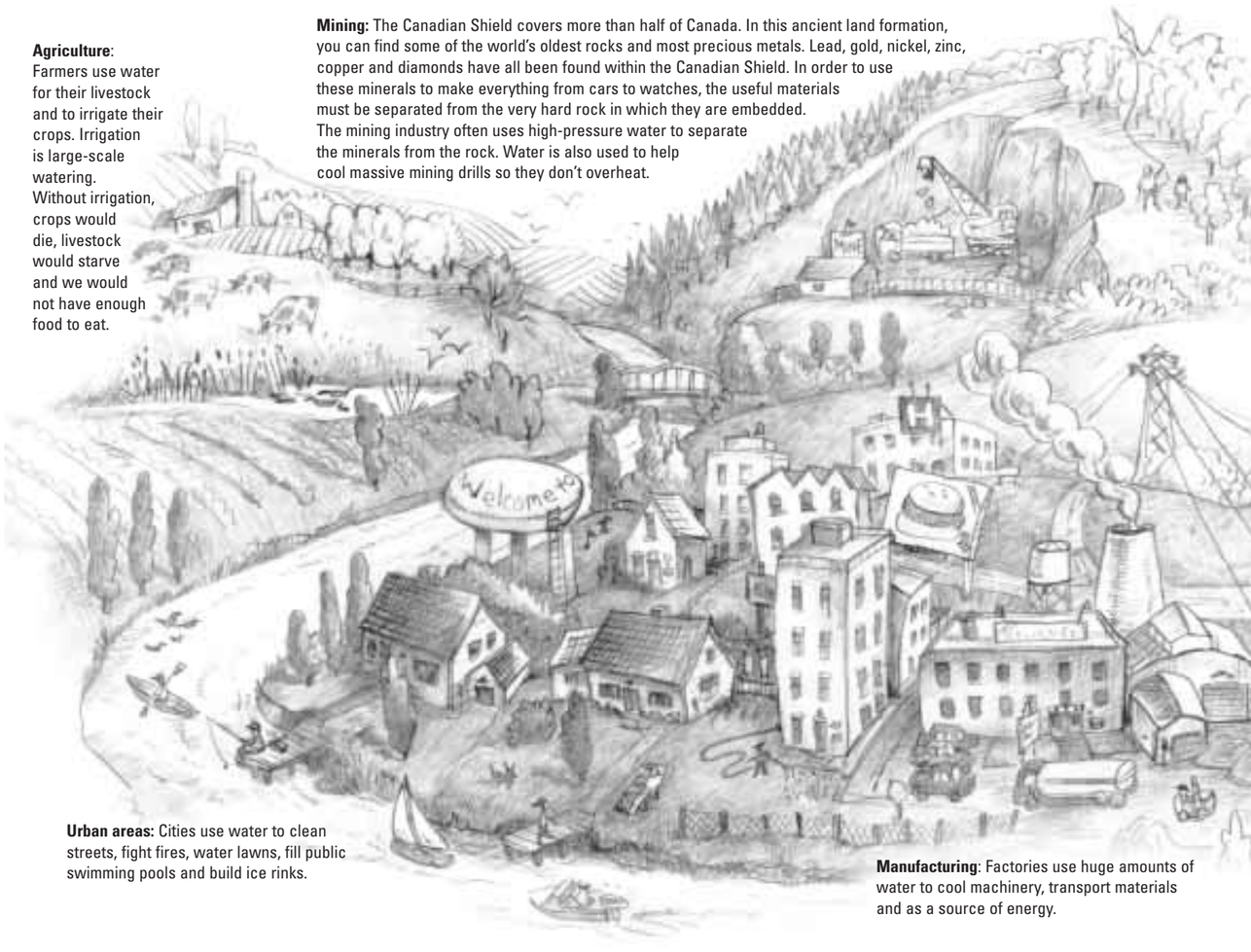
All about our most precious resource

Water, Water Everywhere

Whether you're sipping a glass of refreshing ice water, taking a cool dip in the lake or having a snowball fight, water is an important part of your daily life. Water sets Earth apart from all the other planets in our solar system. Water is why there is life on this planet. Ontario is blessed with an abundance of fresh water. In fact, 18 percent of the world's fresh surface water is found within the Great Lakes! Fresh water fills our lakes (there are more than 225,000 in Ontario), creeks, streams and rivers. Even though our province has a tremendous amount of water, our supply is not limitless. We use water for cooking, bathing, washing, drinking, irrigation of cropland, manufacturing, generating energy, leisure activities and waste disposal.

Agriculture: Farmers use water for their livestock and to irrigate their crops. Irrigation is large-scale watering. Without irrigation, crops would die, livestock would starve and we would not have enough food to eat.

Mining: The Canadian Shield covers more than half of Canada. In this ancient land formation, you can find some of the world's oldest rocks and most precious metals. Lead, gold, nickel, zinc, copper and diamonds have all been found within the Canadian Shield. In order to use these minerals to make everything from cars to watches, the useful materials must be separated from the very hard rock in which they are embedded. The mining industry often uses high-pressure water to separate the minerals from the rock. Water is also used to help cool massive mining drills so they don't overheat.



Urban areas: Cities use water to clean streets, fight fires, water lawns, fill public swimming pools and build ice rinks.

Manufacturing: Factories use huge amounts of water to cool machinery, transport materials and as a source of energy.

Did you know... each person in Ontario uses at least 227 litres of water every day! The average household uses 30,000 litres of water per month!

If we have so much water, why are we concerned about using it? Simple: water is necessary for our health and wellbeing and for the environment. Without water, all other living things, from the tiniest insect to the giant blue whale, would cease to exist. Urban sprawl, the improper disposal of chemicals and wasteful use of water pollute the waterways and damage our natural ecosystems.

How does the water get to your house?

You turn on the tap and out pours cool, refreshing water. In the city, drinking water flows through a series of underground pipes that run between houses (and other buildings) and water treatment plants. In Toronto, drinking water is pumped from Lake Ontario to a water treatment plant. Solids and harmful chemicals are removed so that the water is fit to drink.

Less than 1 percent of the total amount of clean water generated at a water treatment plant is used for drinking. We are spending a lot of money cleaning and purifying water that then runs down the drain, waters our lawns, cleans our cars or is flushed away!

Groundwater

If you live in the country, you might be getting your water from a well. A well is a hole that is dug into the ground and fitted with pipes that reach down to the aquifer or water table. Water is pumped directly from the ground and is not chemically treated to remove harmful bacteria. Water that comes out of the ground is called groundwater.

In some places, water pools underground. These natural storage areas are called aquifers. One of the most important aquifers in southern Ontario is the Oak Ridges Moraine. A moraine is a land feature that was created thousands of years ago by retreating glaciers which left behind rock, gravel and sand. The Oak Ridges Moraine is a broad ribbon of land running parallel to Lake Ontario from Rice Lake in the east to the Niagara Escarpment in the west.

Sometimes referred to as "southern Ontario's rain barrel," rain and snow percolate down through the sand and gravel of the moraine and collect in pools, or aquifers. The sand and gravel in the moraine act like a giant filter, removing pollutants and providing fresh drinking water for hundreds of thousands of local residents.

Safeguarding natural landscapes such as the Oak Ridges Moraine from development helps ensure a continual supply of clean water.

Did you know... nearly 3 million Ontarians (about one-quarter of the province) get their drinking water from groundwater!

Try this experiment to see how soil can actually make water cleaner!

What you'll need:

- A medium-sized funnel
- Small piece of cloth
- Elastic band
- Some soil
- 500 ml water
- Food colouring (blue or red work best)
- Spoon
- 2 clear glass jars

What you do:

1. Place a small piece of fabric over the end of the funnel and secure it with the elastic band.

2. Place the funnel in the mouth of the empty glass jar.

3. Mix several drops of food colouring with the water and stir with the spoon.

4. Fill 1/2 of the funnel with soil.

5. Slowly pour half the coloured water onto the soil.

Wait a few minutes and then compare the colour of the water in the original jar with the water that has seeped through the soil and leaked into the empty jar.

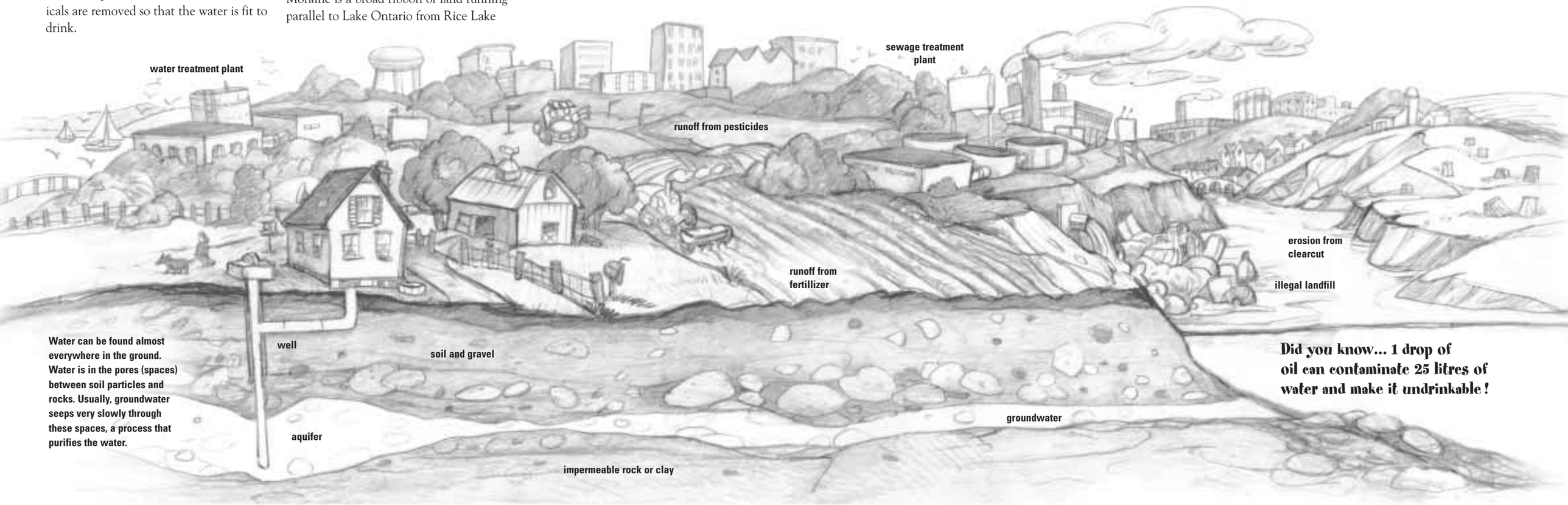
Results:
The filtered water should be lighter in colour than the original water. Now think of the food colouring as a pollutant or chemical. You can see how the soil acts as a filter, making our drinking water cleaner and healthier!

Groundwater Pollution

Although groundwater is naturally filtered, it can still become contaminated. Groundwater contamination occurs in two ways: point and non-point. A point source of contamination is one that can be precisely located, such as leaks or spills from a factory, a landfill site, livestock waste or sewer lines.

Non-point pollution sources are more widely distributed and difficult to pinpoint. Examples of non-point pollution are fertilizers and pesticides applied to agricultural lands and contaminants in precipitation (such as compounds of acid rain). Diseases, tumours, genetic deformities, immune system damage and reduced fertility have been found in fish and wildlife that live in polluted waters.

Did you know... approximately 10 million people worldwide die each year from diseases caused by unsafe drinking water, lack of sanitation and insufficient water for hygiene!



Did you know... 1 drop of oil can contaminate 25 litres of water and make it undrinkable!