



Get Ready For The One Tonne Action Challenge!

Read through the four elements of the one-tonne challenge - making a difference is easier than you think!

- **Watt's It All About?**

As our demand for electricity increases, so does the rate at which power plants need to burn fossil fuels...

- **Water Spy**

Wasting water wastes electricity...

- **Fueling Change**

Every liter of gasoline we use to operate a motor emits carbon dioxide into the atmosphere...

- **More to Explore**

There are many ways and places where our actions can make a big difference...

A thousand small actions can make a TONNE of difference!



Watt's It All About?

Much of the electricity produced in Canada comes from the burning of non-renewable fossil fuels. As our demand for electricity increases, so does the rate at which power plants need to burn these fuels. Burning fossil fuels to produce electricity is a primary source of greenhouse gas emissions.

1. **Stop window drafts by caulking gaps or adding weather stripping.**

By draft proofing your home with caulking and weather stripping you can reduce heating costs by 20% and reduce GHG emissions by up to a half tonne. You can locate window drafts (air leakage) by spotting frost formations, feeling with a moistened finger or by using draft detector (try dangling a feather or thread to check for air movement from drafts)

2. **Turn off lights in a room that is not in use.**

Turning off one 60-watt bulb for one hour per day when not needed can save up to 0.19 tonnes a year. Why not make a little reminder note or sign and put it near light switches to remind family members to turn off the lights.

3. **Replace standard light bulbs with compact florescent bulbs.**

Compact florescent light bulbs last up to ten times longer and use one quarter of the electricity of a standard incandescent bulb. Replace 5 standard light bulbs in your home with compact florescent light bulbs and you can reduce GHG emissions by 1/8 tonne

4. **Keep the fridge door closed as much as possible. Check for air leaks around the fridge door and check the internal temperature of the fridge, then adjust as necessary.**

You can check the door seal of a refrigerator by using a piece of paper. The paper should be held tightly by the closed door at any point around the perimeter of the door to see if there are any air leaks. However, the biggest air leaks from a fridge occur when you leave the door open! A good idea is to think ahead about what you will be taking out or putting into your fridge, so that the door is not left open unnecessarily. Look at the temperature setting of your fridge. It is at its most energy efficiency when set at 3 degrees Celsius. Adjust accordingly.



- 5. Set your house thermostat at 22 degrees Celsius or lower. Check that the nighttime setting is lowered, perhaps to 18 degrees C or less.**

Any changes in the thermostat setting should only be done with the supervision of an adult. A reduction of 3 degrees Celsius at night or when you are away during the day can reduce your GHGs by half a tonne. A programmable thermostat makes this easier to control.

- 6. Turn off the computer when it is not in use or at the end of the day.**

Turning off the computer at night can save up to 0.2 tonnes. If you have the choice, use a laptop computer instead of a desktop computer because they can use up to 90% less energy.

- 7. Take advantage of window coverings and curtains to save on energy.**

Closing curtains on cold days helps to keep out the cold air and keeping curtains closed on hot days helps to keep rooms cooler. On a sunny day in winter, consider keeping curtains open to take advantage of passive solar energy.

- 8. Make certain that weather stripping on doors is in good repair.**

Locate door drafts by using a draft detector, a feather or tissue strip attached to a toothpick. Caulking or weather stripping around doors can reduce energy costs.

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Water Spy

What is the connection between water and GHG emissions? Wasting water wastes electricity. This is because supplying water and water treatment water requires vast amounts of energy and, much of that energy comes from the burning of fossil fuels.

9. **Stop unnecessarily running water.**

Don't run water unnecessarily at a water fountain, when washing dishes or brushing your teeth. Save up to 25 liters per minute by turning off the water when brushing your teeth

10. **Take a quick shower instead of a bath.**

Heating of water can account for 1/4 of your home's energy use. Shorter showers use less hot water. A five-minute shower uses up to 50% less hot water than a bath.

11. **Have a low flow shower.**

Save up to 0.4 tonnes of GHGs per year by installing a low flow showerhead or keeping the shower flow at a low volume. This is because a low flow shower head uses up to 60% less water

12. **Turn off taps tightly and check that they are not dripping**

A faucet that leaks enough to fill a soda bottle in a half hour will waste about 8,000 liters of water per year

13. **Rinse in cold water and wash in warm water.**

You can save 50% less energy by using warm water rather than hot water when washing clothes. Clothes rinsed in cold water come out just as clean!

14. **Water grass and flower beds early in the morning.**

To stay green and healthy, most lawns and gardens only need 2 to 3 cm of water per week. The air temperature rises during the day resulting in more water evaporation. Also, 50% of the water from a sprinkler evaporates before hitting the ground.

15. **Install a toilet dam in the water tank of your toilet.**

Toilets that are not low flush toilets can use 18 to 26 liters of clean water with every flush. By placing a water filled plastic liter soda bottle in the toilet tank, 11 liters of water can be saved per flush!

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Fueling Change

The greenhouse gas that contributes most to climate change is carbon dioxide. This is because many of our human activities produce carbon dioxide (CO₂) in huge quantities. For example, every liter of gasoline we use to operate a motor emits carbon dioxide (CO₂) into the atmosphere.

16. Walk, cycle, in-line skate, or take public transit as an alternative to using private motor vehicles.

Driving 10% less by walking, cycling, carpooling or taking public transit, can reduce greenhouse gas emissions by 0.2 to 0.8 tonnes per year, depending on the vehicle. Have fun with your friends, and you will be getting exercise and fresh air. No more sitting in traffic.

17. Stop using gas lawn mowers, leaf blowers and pressure washers.

Push mowers, rakes, and brooms save electrical or fossil fuel energy and using your own energy is good for your health

18. Avoid using the air conditioner in your car, opening the window can be very effective a lot of the time.

An air conditioner can account for as much as 1/5 of your car's fuel consumption during stop and go traffic

19. Plan trips in advance so that errands can be combined.

Transportation is responsible for 50% of individual Canadians' GHG emissions, and vehicle exhaust can account for up to 2/3 of smog producing pollutants

20. Ask friends and family who pick you up for a ride to turn off the vehicle's engine when they are waiting for you.

If every Canadian motorist avoided idling their vehicles for just five minutes a day, all year, more than 1.6 million tonnes of carbon dioxide, along with other toxic substances, would not enter the air

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More to Explore

Many things we do everyday creates GHG's. But the good news is that there are many ways and places where a student's actions can make a big difference. Exploring these challenges and looking for new ones can be both fun as well as rewarding

21. **Plant a tree.**

Planting one tree to shelter a heated building can save up to 0.1 tonne

22. **Compost organic kitchen waste.**

Organic waste, such as food scraps (fruit, vegetables, coffee grounds, etc.), and leaf and yard waste, when properly composted, breakdown quickly and safely, and are transformed into rich soil. If organic waste is sent to landfills, it produces methane gas, a potent GHG, because, when it is buried, it breaks down where no oxygen is present. If your family composts, you will slow the growth of landfills, and reduce your GHGs by more than 1/8 tonne a year. Remember, compost makes a valuable fertilizer for your garden.

23. **Don't buy disposable items that are used once and then thrown away.**

Buying items that can be reused helps to save energy that is needed to manufacture, package and send them to market. Not buying disposable items helps to reduce the amount of landfill space needed.

24. **Recycle everything that you can - newspapers, paper products, plastics, glass and cans.**

It takes half as much energy to recycle newspapers as it does takes to make new newsprint

25. **Give your dishwasher a rest. Save on both water and energy by washing and drying dishes by hand**

If you fill up half of one side of the sink with soapy warm water and the other side with rinse water, you use only half as much water as most dishwashers. If you choose to use the dishwasher, make certain it is full and that the auto-dry (heated) selection is off.

26. **Take bags with you when you go shopping.**

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27. **Use a microwave to warm up small amounts of food.**

Microwave ovens use about 50% less energy than conventional ovens. However, for larger amounts of food, conventional ovens are more efficient.

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