

One Planet Living - Reducing our Footprint

Kahoot! Quiz Supplementary Information



Take the Kahoot Quiz [here](#):



A photograph of two whole onions and a partially filled white grocery bag on a light blue wooden surface. The onions are positioned at the top of the frame, and the bag is at the bottom. The background is a rustic wooden plank wall.

Minimize food waste to reduce your emissions

A **weekly meal plan** helps reduce food waste by buying only what you need. The less you buy, the less you waste!

Making lunches at home helps avoid food waste by using up what you have. It can also avoid single use packaging and utensils. Bonus: researchers have found that those who cook at home tend to be healthier and spend less money on food.

By **buying local** we can reduce both supply chain waste, and the energy that goes into keeping our food fresh over long distances. Not to mention saving on fuel used to transport imported food!

Beware though... if we drive to markets in gasoline vehicles, or purchase from energy intensive greenhouses this can offset the benefits of buying local. Get to know farmers and merchants and influence them to sell things with lower environmental impacts. Spending money at local vendors that are also climate and environment-conscious, signals that this important to you.

And, locally made food, products and services keep money in the local economy, making our communities vibrant places to live!

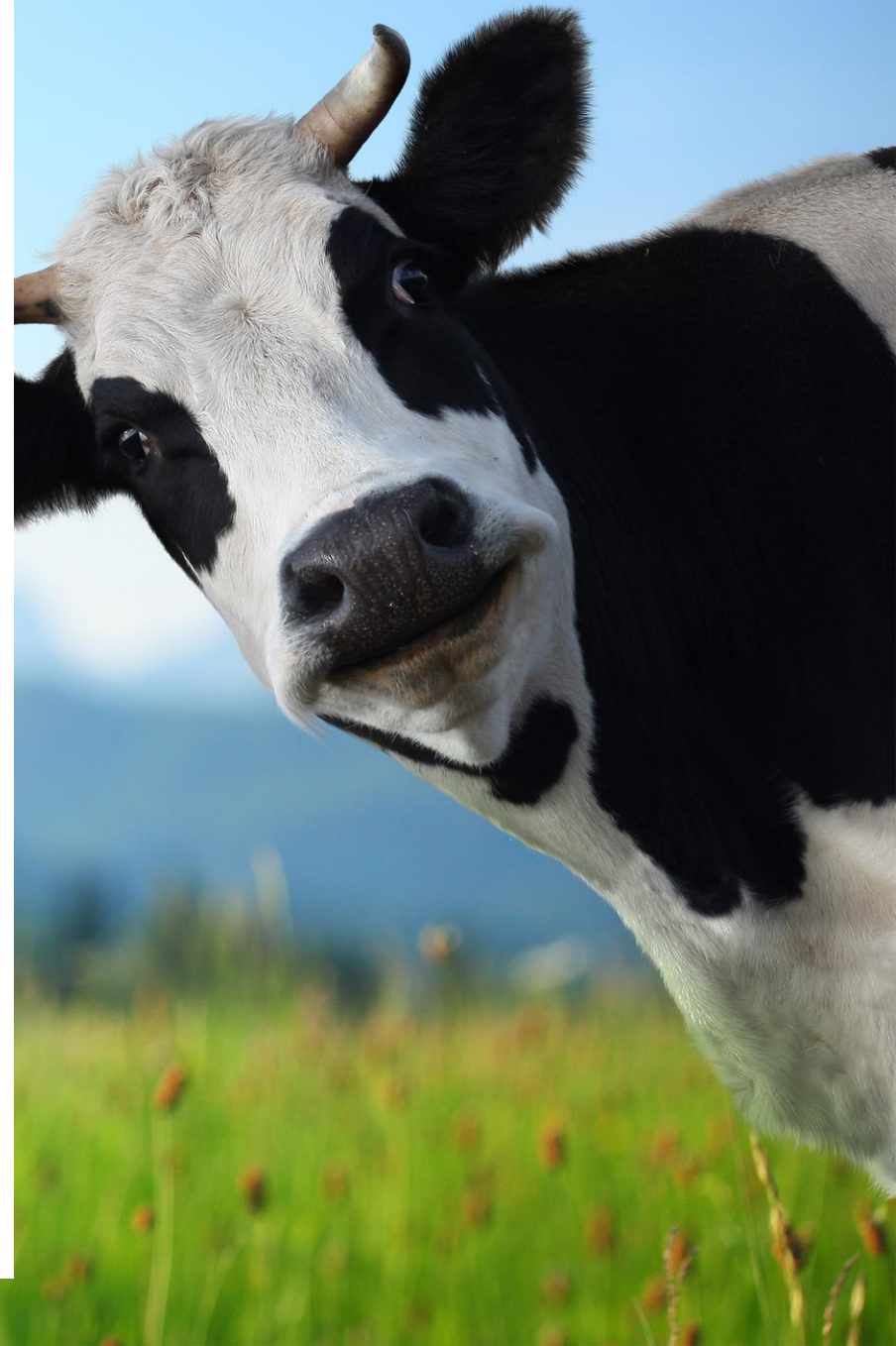
Consider the climate impact of food choices

Getting our proteins from **cattle and sheep** has a high impact on the environment because of the amount of land, food and fertilizers needed to rear them, and the methane given off by manure and through their burps. Did you know methane is a greenhouse gas more potent than carbon dioxide?

The footprint impact of **dairy milk and cheese** closely follows meat. Cheese has a high impact because of the amount of milk it takes to make it. About ten kg of milk are needed to make one kg of cheese! As with beef cattle, dairy cows emit a lot of methane.

Choosing **plant-based** foods as much as possible is a great way to help reduce emissions.

Use this protein scorecard to learn more:
www.wri.org/data/protein-scorecard



A photograph of a room with a stone wall, a window with a potted plant, and a radiator. The radiator is a large, brown, cast-iron unit with vertical fins. The window is on the left, and the potted plant is on the windowsill. The wall is made of rough, light-colored stone. The floor is made of dark wood.

Smaller homes can use less energy

Most of our homes use a lot of energy. **Over 75% of Canadians' residential energy use is because of space and water heating.**

Suburban sprawl and a doubling of average home sizes outside of urban centres since the 1950s has greatly increased environmental impact from materials and energy use.

Smaller homes are easier to clean, maintain, and heat, and they use less land (especially higher density multi-family homes), all of which means a lower footprint. A home that is easier to maintain and keep warm will save you money, reduce your footprint, and free up more of your time for enjoying time with family and friends.

If you have a bigger home, consider hosting a student or renting space!

Reduce your home's carbon footprint

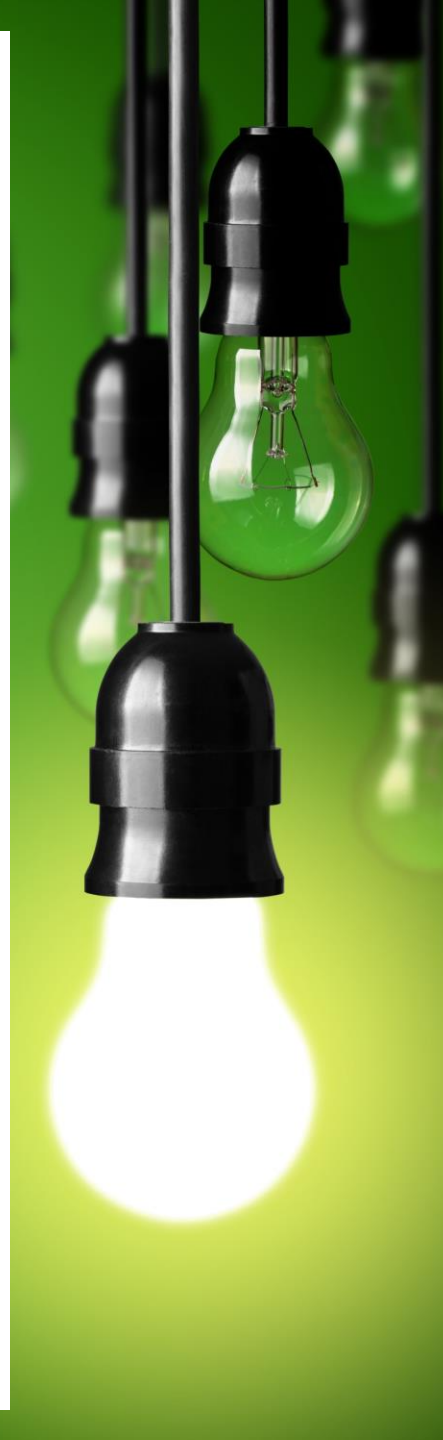
Home heating is the biggest energy user in our homes, and most of our homes still rely on greenhouse gas emitting fossil fuels (natural gas, oil, etc.). An **electric heat pump** is a great way to eliminate this impact. And, since heat pumps also provide cooling, they can make our homes more comfortable year-round too! If you own your home look into electric heat pump options, and if you rent talk to your landlord and friends about the benefits of heat pumps.

A home energy audit will also help to see if you need extra insulation or other improvements, which can also help reduce the size of heat pump needed.

Turning down the thermostat overnight or when you're not at home is another great idea, especially if your home is heated with gas or oil.

Most of the energy used for laundry comes from heat - to warm up water or to dry clothes. So **cold water washing and hang drying** is an easy way to save energy and reduce carbon pollution, especially if your hot water is heated by fossil fuels. Water heating accounts for about 90% of the energy used to wash clothes – in BC, you can save up to \$70 per year by washing in cold water. Save even more by washing with full loads.

Standby power can account for 10% of an average household's annual electricity use! **Unplug, or switch off unused electronics** using a power bar, and save \$50 per year. Even though our electricity in BC is close to 100% renewable energy, energy efficiency actions make a difference and help us avoid the need to build new hydropower dams and electricity infrastructure.



Natural gas is a fossil fuel

Natural gas is a fossil fuel, just like coal and oil. Natural gas can include compressed natural gas (CNG) or liquified natural gas (LNG).

Natural gas is mainly made up of methane which is a potent greenhouse gas, and there are lots of leaks that happen during extraction, processing and transport of natural gas. Due to the impact of these leaks, recent studies are showing that natural gas use may not have any benefit over coal.

This means **it is not a climate change solution to use natural gas** to replace oil in heating our homes, or to replace diesel in buses or ferries, or to replace coal for electricity.



Choose low carbon transportation

A big part of our transportation footprint is due to the fuel we use in our cars. Electric vehicles can make a big difference, but also consider the energy used to move the vehicle, and the energy and materials used to make it. Carshare options are a great way to reduce this impact too.

To live sustainably and minimize energy use, **most of our trips should be done by foot, bike, or small mobility devices** whenever possible. **Transit** is the next best option, especially if it runs on electric power. Fewer vehicles on the road also reduces traffic congestion and air pollution!

If your typical trips take you less than 30 minutes walking or biking, consider not owning a car, or leaving the car at home and get active for your health and for the planet.



Reduce your fashion footprint

The fashion industry as a whole is responsible for more greenhouse gas emissions than all international flights and maritime shipping combined!

As an example, **one pair of jeans takes 3,700 L of water to make - that's about 25 full bathtubs of water! Making these jeans also results in as much greenhouse gas emissions as driving a gas car over 100 km!**

Did you know that most of the footprint impacts associated with the stuff we buy is because of **'upstream' impacts** (e.g., mining, production and shipping).

Instead of buying new, repair well-loved items or if you need something new-to-you, check out local shops that sell used clothing. Focus on quality, reuse, and repair. Buying fewer things and making them last really helps lighten our footprint. Bonus: you'll likely save money too!





Skip the plastic bottle

Globally, we use **17 million barrels of oil** each year just to produce plastic water bottles. And that's not all, every year **8 million metric tonnes of plastics enter our oceans.**

According to the Ocean Conservancy, plastic water bottles are the most common form of pollution on our beaches and in our oceans.

Did you know that **it takes about three times the amount of water that's in a water bottle to produce the plastic it comes in?**

This means we can all have a big impact by carrying a reusable bottle and reducing single-use plastics.



Reduce your E-Waste

Canadians produced nearly one million tonnes of **electronic waste** (e-waste) in 2020!

Not only are electronic devices energy and material intensive to produce, when they are tossed into landfills, toxic substances they contain may end up contaminating our land, water and air.

Save some cash and try fixing things - check out a **repair** café, look for a licensed repair professional or find a repair manual at **www.ifixit.com**. If you're getting rid of a device that is still usable, **donate it for reuse**. You'll help reduce the need to extract new resources and make tech accessible to more people. Otherwise, **recycling** ensures your electronics don't cause environmental damage by keeping them out of our landfills. Don't forget, this applies to electronic appliances in your home too!

Advocate for change

Talk to people about climate action and offer tips that have helped you reduce your footprint. Chat with people in your school or workplace, community association, Strata Council, and share ideas in a friendly way to amplify your impact. The more awareness we can create, the better positioned we are as a society to affect change - through volunteering, how we invest our money, the products we buy (or don't buy) and how we vote.

Communicate with your elected officials - they are there to represent us and they need to hear from us to know what is important to us. **Letters** are a great way to communicate with them. It's likely that your point of view is held by many others, but they may not have the time or capacity to write in. Stand up for what you believe in and empower your elected officials to act.

Petitions can help improve policies and change laws. Petitions to the federal government with at least 500 signatures and support from one MP are presented to the House of Commons and the government must table a response.

And, of course, if you are old enough, **vote** in municipal, provincial and federal elections!



For More Information:

Food footprint: wri.org/data/protein-scorecard

Reducing food waste: lovefoodhatewaste.ca/

Heat pumps: www.bchydro.com/powersmart/residential/building-and-renovating/considering-heat-pump-info-tips.html

Natural gas impacts: climate.mit.edu/ask-mit/how-much-does-natural-gas-contribute-climate-change-through-co2-emissions-when-fuel-burned

Fashion impacts: www.wri.org/insights/numbers-economic-social-and-environmental-impacts-fast-fashion & <https://www.unep.org/news-and-stories/story/cleaning-couture-whats-your-jeans> & <https://www.europarl.europa.eu/topics/en/article/20201208STO93327/the-impact-of-textile-production-and-waste-on-the-environment-infographics>

Bottled water impacts: pacinst.org/wp-content/uploads/2007/12/bottled_water_factsheet.pdf

Home energy, food waste and more: bcsea.org/cool-it-resources/

Electronic waste: repairmatters.ca www.ifixit.com www.recyclemyelectronics.ca www.return-it.ca/electronics/

Advocacy tips: Find your MLA www.leg.bc.ca/learn-about-us/members Find your

MP www.ourcommons.ca/members/en and check your municipal website for the email address for council

Additional References:

Food waste references: <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/food-loss-waste/taking-stock.html>

Home heating references:

<https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/showTable.cfm?type=CP§or=res&juris=ca&rn=7&page=0>

Transportation choices, carsharing: <https://its.berkeley.edu/node/12870>

E-waste references: <https://www.sciencedirect.com/science/article/abs/pii/S0304389423001474>

About BCIT Centre for Ecocities:

The Centre for Ecocities advances the transformation of cities to become socially just and ecologically sustainable through applied research, education, and tool development for municipalities and other stakeholders.

www.bcit.ca/centre-for-ecocities/

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