



Families For Change 4.0

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The Pandemic's effect on Climate Change?

Despite all the slowdowns and lockdowns, *Science Alert* notes that as of April 8th 2021, initial measurements from the National Oceanic and Atmospheric Administration (NOAA) show, “global levels of carbon dioxide emissions are higher than they have been at any given time in the past 3.6 million years. Annual methane emissions - a greenhouse gas 28 times more potent than CO₂ - just experienced their largest year-on-year increase since records began in 1983.” Even though there was a dip last year for a bit, 2020 came out as the fifth largest¹ increase in CO₂ emissions in 63 years of NOAA observation. Without the slowdown, experts think 2020 would have been the worst.

While critical, this shows that we all need to **reduce more** than CO₂ emitting travel (28% of Canada's emissions is Transportation²) - we need to also transform our heating and electricity sources (45% of Canada's emissions²), what we eat and how we produce it, and we need systemic changes to the way business is done.

We need Families for Change (F4C) now more than ever!

We know how passionate you and your family are about preserving and protecting Georgian Bay forever. F4C is back with version 4.0 challenging you to do more because we believe the family unit can be the greatest powerhouse for long-term change. Become a F4C this summer and keep the momentum going!

Our goal:

GBF wants all families who share a love for Georgian Bay to have fun and take action by changing their habits in ways that will benefit the Bay, and ultimately, the globe.

¹ Cassella, Carly. “Scientists Warned Us The Pandemic Wouldn't Solve The Climate Crisis. Guess What.” *Science Alert*, April 8 2021. Retrieved at <https://www.sciencealert.com/carbon-dioxide-levels-just-hit-a-devastating-new-peak-despite-pandemic-lockdowns>.

²Prairie Climate Centre. “Where do Canada's Greenhouse Gas Emissions Come From?” March 7 2018, Retrieved at <http://prairieclimatecentre.ca/2018/03/where-do-canadas-greenhouse-gas-emissions-come-from/>

What is involved?

F4C 4.0 can take as much or as little time as you and your family have to devote to it because every action counts. You can choose from a variety of tasks in different categories or you can simply focus on one or two. *It's entirely up to you.* There are lots of choices and lots of things we can all do to protect ourselves, our families, and the Bay from climate change.

F4C challenges families to work in the following three areas beginning May 17 through September 3 2021:

1. Decreasing greenhouse gas emissions
2. Reducing waste and litter in the environment
3. Mitigating invasive species and preserving wetlands

Decreasing Greenhouse Gas Emissions

Did you know ...

- It takes about 1,500 litres of water to produce one kilogram of wheat, and 10 times that amount — 15,000 litres — to produce the same amount of beef.³
- Incandescent bulbs (they're the ones with the filament inside) release about 90% of their energy as heat so less than 5% of their energy actually creates light.⁴
- If every Canadian family replaced one regular light bulb with a LED bulb, it would eliminate about 40 billion kilograms (90 billion lbs) of greenhouse gases, the same as taking 7.5 million cars off the road.⁵
- Every gallon of gas you and others save not only helps budgets, it also keeps 9 kg (20 lbs) of carbon dioxide out of the atmosphere.⁶

What your family can do ...

- Where do Greenhouse emissions come from? Check out this pie chart bit.ly/GHGPieChart and show this 2 min, 30 second video to your family bit.ly/GHGasVid.

³ Ebikeme, Charles. "Eyes on the Environment" retrieved from https://www.nature.com/scitable/blog/eyes-on-environment/water_world/ April 9, 2021.

⁴ Incandescent light bulb, Wikipedia at https://en.wikipedia.org/wiki/Incandescent_light_bulb retrieved on April 9, 2021.

⁵ Adams, Gryphon, "How Does Changing the Light Bulbs Help the Environment?", retrieved from SFGATE at <https://homeguides.sfgate.com/changing-light-bulbs-environment-70834.html> on April 9, 2021.

⁶ "Reduce Climate Change", the U.S.Environmental Protection Agency retrieved from <https://www.fueleconomy.gov/feg/climate.shtml> on April 9, 2021.

- What light bulbs are in your home and cottage? Check out these sites with light bulb facts for kids bit.ly/21LightBulbFacts (ages 6+) and climatekids.nasa.gov/light-bulbs/ (ages 12+). Discuss and decide which is the best choice for your family (Spoiler alert - LED is the best way to go). Replace your old bulbs with the new and properly dispose of those you have replaced (CFL and Fluorescent lights have small amounts of mercury – these need special disposal as hazardous waste. Do not throw them in your garbage)! Now educate others and tell 3-5 friends about your experience and decision!
- Drive less and carpool (within your bubble) to and from your cottage to reduce your emissions. Save gasoline in your boat by sailing, rowing and paddling when sightseeing, shopping or visiting friends (at a safe distance).
- Learn from this article how to eat for the planet bit.ly/FlexDietInfo. Scroll down to “How do your food choices impact the environment”. Test your food choices according to their emissions. Have your family track your menus for one week. Then make a pledge to reduce 1-3 items to reduce your impact on greenhouse emissions!
- Hang dry your clothes when you can and use wool dryer balls when you can't - they reduce drying time by 25% because they help separate the clothes, are all natural and contain no chemicals!
- This link bit.ly/100WaysConserve has simple great tips for saving water. Engage your family in these and track how much you are saving!
- Join David Suzuki's “Charged Up Network” at bit.ly/ChargedupNetwork and help build the climate and clean energy transition movement in Canada.
- Elections are coming. Check the clean energy platforms of all the candidates and demand solutions for the planet. bit.ly/DemandCleanEnergy

Reducing waste and litter in the environment

Did you know that ...

- 3 million tons of plastic waste is thrown away every year in Canada. Only 9% of that is properly recycled and about 29,000 tons ends up in the natural environment.⁷
- Every year an estimated 10,000 tons of plastic pollution end up in the Great Lakes.⁸ Some major pollutants found by GBF yearly include large and small pieces of dock foam, cigarette butts, straws, food wrappers and plastic bags.

⁷ <https://www.canada.ca/en/environment-climate-change/news/2020/10/canada-one-step-closer-to-zero-plastic-waste-by-2030.html>

⁸ <https://greatlakes.org/great-lakes-plastic-pollution-fighting-for-plastic-free-water/#:~:text=More%20than%2022%20million%20pounds,pieces%20known%20as%20%E2%80%9Cmicroplastics.%E2%80%9D>

- In Canada, approximately 15 billion plastic bags are used every year and close to 57 million straws are used daily.⁹
- A circular economy works to keep materials and products in use for as long as possible by recirculating them back into the economy through reuse, recycling, refurbishing or repurposing. By retaining materials and products in a circular economy it not only reduces demands and impacts on the environment but also has significant economic benefit.¹⁰

What your family can do ...

- Visit your municipality's website to review recycling guidelines and ensure your family is recycling properly. On collection days, make sure lightweight trash and recycling is pushed down into the bin so it can't blow away in the wind.
- Be citizen scientists! Visit shorelines in your municipality and identify locations with litter. Discuss with your household the importance of removing litter from the environment and pick a day to complete a shoreline cleanup together. Visit <https://bit.ly/GBFcleanups> for safety tips and to download a trash tally sheet. Be sure to send your completed tally sheet to brooke.harrison@gbf.org!
- To help keep dock foam litter out of the Bay, check out what is under your dock. Is it unencapsulated polystyrene foam? Learn about its effects by visiting bit.ly/PSFoamGBF. If your dock has unencapsulated foam, consider a plan for alternates. You can find some suggestions at bit.ly/PSFoamGBF. Note that Ontario Private Member's Bill 228 seeks to ban future unencapsulated foam used for docks, it requires third reading to pass, and will take a few years to come into force.
- Volunteer. GBF is deploying waste diverting technologies around Georgian Bay to reduce and prevent plastic pollution in the environment. Seabins remove pollution that has already entered the Bay while Gutter Bins and Trash Traps capture pollution in storm drains before it can enter the water. Volunteer to help characterize waste collected from GBF's Seabins, Gutter Bins and Trash Traps by emailing nicole.dimond@gbf.org. Read more about the Diversion 2.0 Project and waste diverting technologies at gbf.org/divertplastics
- Can your family reduce the amount of single-use plastic it consumes? Try recording every plastic item you recycle or throw out for a week then discuss ways your family could replace or eliminate the need for those plastic items.

⁹ <https://www.canada.ca/en/environment-climate-change/news/2020/10/canada-one-step-closer-to-zero-plastic-waste-by-2030.html>

¹⁰

https://www.ccme.ca/files/Resources/waste/plastics/CCME%20Phase%202020Action%20Plan_En%20-%20external-Secured.pdf

Invasive species and preserving wetlands

Did you know ...

- Invasive species are the second-greatest threat to biodiversity worldwide after habitat loss (loveyourlake.ca)
- Human disturbances cause 10 times more erosion of continental surfaces than natural processes like ice, wind, and water (loveyourlake.ca)
- Ninety percent of all lake life is born, raised, and fed in the area where land and water meet.
- A poorly functioning septic system can be dangerous to the environment. Improperly treated waste can lead to excess nutrients in a lake, algal blooms, and disease-causing organisms. (loveyourlake.ca)
- A natural buffer is the area of vegetation from high water to water's edge that supports a wide variety of plants and animals and can be wetlands, beaches, forest corridors, and native vegetation.

What your family can do ...

- To prevent introduction of invasive species to our ecosystems, never release aquarium plants, fish, or turtles into a natural system, clean your shoes and equipment (boat, ATV, etc.) before moving to a new location, and only buy local firewood when camping. (loveyourlake.ca)
- To properly maintain your septic system arrange a voluntary septic inspection and do regular pump-outs every 3-5 years. Educate your family to understand that your septic is ONLY for human waste -not chemicals, solvents or antifreeze. (loveyourlake.ca). Check out the half-hour video from Rick Esselment: Status of Septic Systems For Georgian Bay. Includes tips on maintaining your septic.

bit.ly/RESeptics

- Naturalize your cottage property. As a family, walk around your property and identify what is already growing, including any invasive plants you will want to remove. Then shop for indigenous trees, shrubs and flowers and plant them on your property. The Georgian Bay Biosphere has a native plant fundraiser. Get your order in by May 28 at <http://bit.ly/GBBNativePlant>. Educate 3-5 of your neighbours or friends on cottage property naturalization ideas.
- Join the Phragbusting team. Invasive Phragmites is a plant that can take over wetlands and shorelines, threatening biodiversity, habitat and enjoyment of the shoreline. See how communities on the eastern side of Georgian Bay came together in 2020 to manage this plant bit.ly/2020Phrag. Join the effort in 2021 and cut invasive Phragmites! Email brooke.harrison@gbf.org to get involved.

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