



GGC Tree Planting Grant Program

In Partnership with TD Friends of the Environment Foundation

Environmental Program Introduction

Congratulations on being a part of the GGC Tree Planting Grant program! As a GGC Tree Planting Grant recipient, we would like to offer you the opportunity to be the first to try out GGC's new Environmental Program. This program offers girls hands-on activities that raise their awareness of environmental issues while inspiring and supporting them to take action.

By participating in eco-awareness activities, girls will develop a better understanding of the natural world in which they live and become more aware of how they impact and affect the world around them. The dynamic learning resources outlined in the following programming material will inspire girls to consider the powerful impact they can have by making simple, everyday eco-wise decisions.

Your tree planting grant, combined with the following programming activities below, can create a powerful and compelling learning experience for girls. Girls will consider how the choices they make every day can be part of the [climate change solution](#). The programming activities will build on girls' existing knowledge and passion for their environment while empowering Members to make a sustained and powerful environmental difference in the world.

How do you integrate this environmental program with your Tree Planting project?

- **Step one** – Spend one meeting exploring climate change. Use or adapt any of the *Climate Awareness Activities* (*for younger girls* and *for older girls*) that work best with your Unit to explore the topic of climate change and how girls can make an impact on this important global issue.
- **Step two** – In your next meeting, introduce the *Together We Can Save Our Planet* poster and explain that the girls should complete the poster at home over the next week.
- **Step three** – In the next meeting, with the girls' completed posters, they can make the GGC *Climate Commitment Certificates* to proclaim each girl's individual contribution to a greener planet.
- **Step four** – Complete your *Tree Planting Project* according to your planting project schedule. At a specific time in your planting, each girl can present their Climate Commitment Certificate to publicly state what they will do to help the environment.

Why a climate commitment?

Individuals who make a written commitment (i.e. the GGC Climate Commitment Certificate) to engage in environmental behaviours are more likely to follow through on those behaviours. When that commitment is presented in a public way, published in a newspaper or shared with friends and family, the likelihood that the individual will act on their commitment is greater still. This program asks you to do just that with your Unit.

Through the GGC Tree Planting Grant program, Girl Guides of Canada is helping to shape the eco-citizens of tomorrow.





Step one: Climate Awareness Activities for Younger Units

Trees (30 minutes)

Purpose: To explore your local environment and gain an appreciation for the important role trees play.

Background Information: To learn more, visit: [Why trees are important](#)

1. Take a short walk in a park or some place with trees. Ask the girls to each pick a favourite tree and give it a name. Give them time to investigate their tree, getting to know its characteristics. They can share a bit about their tree with the Unit.
2. After the walk talk about all the things that trees do for the environment (e.g. produce oxygen, provide shade, hold soil together, offer natural habitat, etc.) and three things that are not good for trees (e.g. invasive species, pollution, drought, deforestation, sidewalks and roads not letting them grow their roots, etc.).

Oceans (45 minutes)

Purpose: To understand how oceans are being affected by climate change.

Background Information: To learn more visit: Oceans and climate change; [100 Things you wish you knew about water](#)

Materials: Water, mineral oil (available at pharmacies and large department stores), blue food colouring, clear plastic bottle with top

1. Ask the girls to think about the important role that oceans play in our environment. You can talk about how oceans are a home to plants and animals, how global warming is causing glacial ice to melt and sea levels to rise, or how algae in the sea absorb carbon dioxide (a greenhouse gas). Ask questions like: why are the oceans so important? What lives in the ocean? How are oceans changing?
2. Fill a large plastic bottle 2/3 full with water. Add blue food colouring to the water.
3. Fill the rest of the bottle with mineral oil, so there's no room for air. Then put the top firmly on the bottle.
4. Lay the bottle on its side. Watch as the mineral oil floats to the top. To make waves in your sea, tilt the bottle back and forth. You can imagine you're at the beach or sailing on the ocean.
5. Think of ways that people can help to protect our oceans!

*Ensure that the bottles are well sealed and make this craft in an area where spilled water or mineral oil can be easily mopped up!

No junk mail (30 minutes)

Purpose: To consider how we can reduce waste and thus greenhouse gas emissions.

Background Information: [Canada Post and junk mail](#)

Materials: Recycled paper, junk mail, art supplies

1. Talk to the girls about where junk mail comes from, about the trees that are cut down to produce the paper and the energy required to transport the mail. Explain that avoiding junk mail is an easy way to reduce greenhouse gas emissions.
2. Hand out the paper and the art supplies. Have the girls write "NO JUNK MAIL PLEASE" on their paper and give them time to draw a picture of a tree or their favourite forest animal as well.



Girl Guides
of Canada
Guides
du Canada



TD Friends of the
Environment
Foundation





3. Tell them that they can take the sign home and ask their parents/guardians about posting it on their front door. They can share with their parents what they have learned about why they should post the sign.

Carbon tag (10 minutes)

Purpose: To explore the relationship between carbon dioxide and the warming of the Earth

Background information: To learn more about climate change, visit: [What is climate change](#)

1. Ask the girls if they know about global warming. Talk with them about the increasing levels of CO₂ (and other greenhouse gases) in our atmosphere that are trapping solar radiation and causing our planet to warm.
2. Play a tag game where one group of girls represent the carbon dioxide (CO₂) molecules and the other represents solar rays.
 - a. Make a circle on the floor using rope, which represents the warming Earth.
 - b. The CO₂ girls are 'it' and when they tag the solar rays, the solar rays must go into the warming Earth zone.
 - c. See how long it takes to warm up the earth!
 - d. Try playing with fewer or more girls representing CO₂ molecules to see how more CO₂ makes the earth warm up faster!





Step one: Climate Awareness Activities for Older Units

Climate Jeopardy (30 minutes)

Purpose: To introduce terms and concepts related to climate change.

Background Information: To learn more, visit: [What is climate change](#)

Materials: Climate answers and questions (Appendix A), tape

1. Print out the Climate in Jeopardy questions and answers. On a chalk board or white board write the categories across the top and point values below. When a girl calls out a category and point value you can cross it off, and read her the “answer” from the printout.
2. Split the Unit into three or four small groups and ask each group to come up with a unique sound to buzz in.
3. The first group chooses a category and point value/answer to respond to. All groups must wait until the answer is read aloud before buzzing in. If the response is correct, that group may pick the next answer, and so on.
4. At the end, ask the girls what they already knew and what was new information. Spend some time reviewing new concepts to ensure that all girls understand.

The Tree Metaphor (30 minutes)

Purpose: To explore the relationship between humans and climate change. To identify concrete steps to reducing our impact on climate change.

Background Information: To learn more, visit: [What is climate change](#)

In the Tree Metaphor activity, the roots represent the causes of climate change, the trunk represents how humans are affected and the branches are the ways that we can fight climate change. You can explore the activity using paper and art supplies or get moving and act out the three parts of the tree.

1. Split the Unit into three groups. Each group represents either the roots, trunk or branches of the tree.
 - a. The Roots: will work together to think of things that humans do to cause climate change (driving, cutting down forests, heating our homes, etc.).
 - b. The Trunk: will work together to think of ways that humans are affected by climate change (storms and hurricanes, rising food prices, invasive species, etc.).
 - c. The Branches: will work together to come up with ways that people can reduce their environmental impact (walking/biking instead of driving, planting trees, eating less meat, planting a food garden, taking shorter showers, etc.)
2. The groups can share the results by drawing or writing their ideas or alternatively act out their answers and let the remaining group members guess.

What goes in the pot? (90 minutes)

Purpose: To discover how the food choices we make impact the environment

Background Information: To learn more, visit: [How to buy and eat local](#); [What is local and sustainable food](#)

Materials: Access to a kitchen, local food ingredients

1. Plan a meal together with your Unit using as many local food ingredients as you can find. Make a list of your ingredients and all of the things that contributed to its production (farmer’s labour, fertilizer, irrigation, processing, transportation, packaging, refrigeration, etc.).



TD Friends of the Environment Foundation





2. Prepare the meal together as a Unit. To avoid having “too many cooks in the kitchen” appoint two or three girls to record all of the energy that they see going into the meal including electricity, water, firewood, etc.
3. After the meal analyze the environmental impact of the meal. Ask questions like: Are you surprised by the amount of energy that goes into each meal? How might the impact compare to a meal with meat, or the meals the girls typically eat? How could the environmental impact be reduced? What lessons about reducing our impact on the environment have you learned?

Make your own paper (60 minutes)

Purpose: To understand the process of recycling paper and how it benefits the environment

Background Information: To learn more, visit: [Why are trees important](#)

Materials:

- an old blender
- an electric iron
- old wire hangers (one for each girl)
- old pairs of panty hose (one pair for each pair of girls)
- newspaper or other paper (not glossy) water
- a big sink or tub (big enough to fit the frame of the wire hanger) filled with 4 inches of water
- old towels

We use paper for lots of things and it’s something we could all probably use less of. Think of ways your Unit could reduce the amount of paper you use and have fun recycling some of the paper waste that you do create!

Trees are important, and after you spend so much time and effort in planting your very own trees, you don’t want to waste paper, so learn to make your own! Recycling paper can lower the use of electricity and water, make less pollution and of course save trees!

Make sure you have a place to work where you can make a big mess!

1. Tear the newspaper into strips and then squares and soak in a bucket of water for at least a few hours, or overnight.
2. Meanwhile, make a frame out of the coat hanger. You’ll need a frame for each piece of paper you make. Stretch the hanger and bend it into a rectangle/square shape. Take one leg of the panty hose and stretch it carefully over the hanger frame. Make sure it is tight and flat.
3. Once the paper has soaked, it is time to get out the blender. Add a handful of paper and water to the blender. Blend until mushy. Add more paper and water as room develops in the blender.
4. Add the blended paper mush to the sink or tub. Scoop the frame to the bottom of the sink, and lift it out slowly. Let the water drain out for about a minute.
5. Lay out sheets of newspaper and the old towel. It should be a bit larger than the final piece of paper. Turn the wire hanger upside down on the towel to turn out the homemade paper. If necessary, gently peel the paper away from the pantyhose. The paper and towel should absorb the excess water. You can layer additional papers on top by adding more towel, then newspaper then another towel on top of the first one.
6. Use the iron, on its hottest setting, to press the paper and remove the excess water.





You can find more directions on how to make paper from these websites:

www.make-stuff.com/recycling/paper.html

http://www.ecokids.ca/pub/fun_n_games/printables/activities/assets/science_nature/paper_making.pdf

<http://www.makingyourown.co.uk/make-your-own-recycled-paper.html>



TD Friends of the
Environment
Foundation





Step Two: Together We Can Save Our Planet Poster

For all ages

Purpose: To encourage each girl to observe and reflect on her own environmental behaviours, taking note of opportunities to be friendlier to the environment.

Materials: Printed copies of the **Together We Can Save Our Planet** poster for each girl.

1. Introduce the **Together We Can Save Our Planet** poster. Explain that the “I can” statements were provided by Girl Guides from all across Canada. Take turns reading the “I can” statements. Ask the girls:
 - a. What do you think of the “I can” statements?
 - b. Are there any things that you cannot commit to?
 - c. What other “I can” statements would you like to add? (see Appendix B for more ideas)
2. Explain that the Together We Can Save Our Planet poster should be put up at home somewhere visible, like on the fridge or on your bedroom door. Explain to the girls that during the week they and their families can think about the statements, and check the ones that they feel most strongly about. Remind the girls to bring in the **Together We Can Save Our Planet** poster to the next meeting.





Steps Three and Four: Climate Commitment Certificates and Tree Planting Event

For all ages

Purpose: To create the opportunity for the Unit to make a written, public commitment to making positive environmental changes in their lives.

Materials: Completed **Together We Can Save Our Planet** posters, copies of the **Climate Commitment Certificate** template markers and other art supplies.

The girls in the Unit have now gained an understanding of climate change and have seen how the choices they make every day can and do have an impact. Using the “I can” statements from the **Together We Can Save Our Planet** poster as a starting point, have the girls complete **Climate Commitment Certificates** that state individually what they will do to reduce their impact on climate change.

Here’s one way to facilitate this:

1. Ask the girls to tape up their Together We Can Save Our Planet posters around the meeting space.
2. Spend five minutes checking out each other’s posters. Ask the girls to note which “I can” statements are common, and if there are any different ones that they hadn’t thought of.
3. Provide an opportunity for each girl to share the “I can” statements that she feels most strongly about and that she would like to include on her Climate Commitment Certificate.
4. Provide art supplies and have each girl complete her own Climate Commitment Certificate. She can fill out the “I can…” statements on the flower petals and decorate it with her symbolic environmental imagery.
5. Bring the Climate Commitment Certificates along to your tree planting day and have the girls in the Unit present them to each other, in a meaningful expression of a collective commitment to protecting our shared climate!





Appendix A

Climate in Jeopardy – Answers and Questions

Answers

Greenhouse Gases

200: Gases like carbon dioxide, methane and nitrous oxide trap the sun's heat in the atmosphere creating this effect.

400: Greenhouse gases are created as a result of burning these.

600: One tree can remove this many pounds of carbon dioxide from the atmosphere each year: 13, 20, 26.

800: This energy source produces the greatest amount of carbon dioxide.

1000: A carbon sink does this.

Water

200: Canada generates over 60% of its electricity from this source.

400: A typical five-minute shower uses this many litres of water: 50, 100 or 150.

600: Pure water is the only emission from this type of vehicle.

800: This country has the world's greatest supply of fresh water.

1000: The average Canadian uses this much water per day: 26 litres, 258 litres, or 329 litres.

Energy

200: These are two kinds of renewable energy.

400: These are the two fastest growing energy sources in the world.

600: This household appliance uses the most energy.

800: Incandescent light bulbs consume approximately 75% more electricity than this type of bulb.

1000: Of all the fossil fuels, this is considered to be the cleanest.

Transportation

200: This type of vehicle is powered by both an electric motor and gas engine.

400: This kitchen waste product can be used to power cars.

600: This form of transportation accounts for 4-9 % of the total climate change impact of human activity.

800: This country has the largest network of high speed rail trains.

1000: The country with the most bicycles per capita.

Food

200: The average meal travels this far from the farm to your plate: 200km, 800km, 1,200km.



TD Friends of the
Environment
Foundation





- 400: About 28% of global methane emissions come from this source.
 - 600: The production of this accounts for approximately 70% of all agricultural land use.
 - 800: Climate change may reduce this type of national security.
 - 1000: This animal waste product generates nitrous oxide, a greenhouse gas which is 296 times the harming effect of carbon dioxide.
- Waste
- 200: The acronym for this is NIMBY.
 - 400: 13 billion of these are delivered to homes in Canada each year: pizzas, newspapers or junk mail.
 - 600: When a compact fluorescent light bulb burns out it is important to dispose of it properly because of this hazardous metal.
 - 800: About 38 percent of Canada's methane emissions come from this source.
 - 1000: The average Canadian produces this much waste per day: 2.2 kg, 4 kg, 4.5 kg.





Appendix A con't

Climate in Jeopardy – Answers and Questions

Questions

Greenhouse gases

200: What is the greenhouse effect?

400: What are fossil fuels (oil, gas, coal)?

600: What is 26?

800: What is burning coal?

1000: What is absorb and hold carbon dioxide?

Water

200: What are hydro-electric dams?

400: What is 100?

600: What is a hydrogen fuel cell vehicle?

800: What is Canada?

1000: What is 329 litres?

Energy

200: What are solar, wind, water, geo-thermal or biomass?

400: What are wind and solar power?

600: What is the refrigerator?

800: What is a compact fluorescent bulb?

1000: What is natural gas?

Transportation

200: What is a hybrid vehicle?

400: What is cooking oil?

600: What is air travel?

800: What is China?

1000: What is the Netherlands?

Food

200: What is 1,200 km?

400: What are cows? (Cows can produce up to 200 litres of methane per day!)



TD Friends of the
Environment
Foundation





600: What is meat?

800: What is food security?

1000: What is manure?

Waste

200: What is 'not in my back yard'?

400: What is junk mail?

600: What is mercury?

800: What are landfills?

1000: What is 2.2 kg?

Sources:

www.naturecanada.ca/water_facts.html

www.davidsuzuki.org/

www.on.ec.gc.ca

www.earthcarecanada.com

www.greenpeace.org

www.epa.gov/rlep/faq.html

www.ecokids.ca



Girl Guides
of Canada
Guides
du Canada



TD Friends of the
Environment
Foundation





Appendix B

More “I can” Statements

- I can donate clothes I no longer wear to someone who might need them.
- I can start composting at home.
- I can drink tap water instead of bottled water.
- I can pack a waste free lunch.
- I can use a fan instead of an air conditioner.
- I can turn down the temperature on my household hot water heater.
- I can use my own reusable mug when buying hot chocolate or coffee.
- I can run the clothes washer, dryer and dishwasher only when they're full.
- I can replace my shower head with a low-flow one.
- I can bring my reusable bag shopping with me.
- I can do my laundry using cold water.
- I can plant a tree that will absorb greenhouse gases!
- I can avoid buying over-packaged products.
- I can celebrate Earth Day on April 22.

