

Plastic Free Challenge

Plastic is a part of our everyday lives. We use it almost constantly. Plastic makes our lives more convenient, is durable and long lasting. However, we have become dependent on plastic and we are creating a lot of waste.

One of the biggest problems with plastic is how we dispose of it. Did you know that since the 1950s 8.3 billion tons of plastic has been generated around the world and only 23 per cent of those plastics have been recovered or recycled. In fact 8 million metric tons of this plastic waste enters our oceans each year.

Single use plastics compound this problem; they are made to be used once and then tossed aside. Canadians use 2 billion plastic straws and 1 billion plastic bags each and every year. Many of these items are not recycled or reused so we just keep on making more.

Many Canadians are now trying to use less plastic and reduce their impact on the environment.

This challenge was developed to introduce the idea of using less single use plastic and why single use plastics are harmful to our environment.

To earn this Plastic Free Challenge everyone must do the opening and closing activity for their branch as well as complete two activities from each theme (At Home, In Your Community and Out in Nature) for a total of 8 activities. Once completed send in the completed badge order form with the number of badges required and which activities you did.

Sparks

To earn this Plastic Free Challenge Sparkks must do the opening and closing activity as well as complete two activities from each theme (At Home, In Your Community and Out in Nature). Once completed send in the completed badge order form with the number of badges required and which activities you did.

Opening activity

Learn about what single use/disposable plastic is, try to name 10 examples. Why should we use less single use products such as plastic forks and knives?

At Home

1. Help your caregivers pack your lunch for school without using plastic
2. Play a game of memory and match the single use disposable product with its reusable alternative. See the resources section for the PDF. Discuss why using a reusable item is better for the environment than a disposable item.
3. Read a book from the library on the importance of reducing our plastic usage or a book on recycling plastic.
4. Use a recycled plastic bottle and old plastic toys or tiny items to make an I Spy Bottle. See this link for how to <http://www.pbs.org/caregivers/crafts-for-kids/eye-spy-rainbow-bottle/> . Try dyeing the rice with food colouring to make it a rainbow I Spy bottle. You can also do this with a plastic zip top bag if you don't have bottles, just make sure to tape the top shut.



In Your Community

1. Visit a recycling centre or have someone come into your unit to teach you about the 3 R's. Focus on the first R, reduce. What can we do to reduce the amount of plastic we throw out every day?
2. Play a sorting relay game of reusable and disposable products. Gather up enough reusable and disposable items for each girl to have several pieces. Divide them into two equal sized piles and place at one end of the playing area and place three bins/boxes at the other end of the playing area. Label each bin with Recycling, Garbage and Reusable (you may want to add pictures to help the girls that cannot read). Break the girls into two teams and have them take turns picking up an item, running to the other end and sorting it into the correct bin. The first team to run out of items wins. Prior to playing, sit down with the girls, describe each item and show them which item goes into which bin (recycling, garbage or reusable).
3. Make a game using recycled plastic such as plastic bottle bowling, bottle cap tic tac toe, or a bean bag toss.
4. Play a Kims Game using disposable plastic products

In Nature

1. Play a fishing game. Glue magnets to the sides of recycled bottles and plastic waste (grocery shopping bags, straws etc as well as some paper fish cut outs. Make a "fishing pole" out of a stick, attach a piece of string and attach a magnet to the end of the string. Put all plastic pieces and fish in to a kiddie pool or other container and give the kids each a turn to try fishing for the fish using the fishing poles. Have a discussion around if it was easy or hard to catch the fish vs plastic. Discuss why ocean plastic pollution is an issue and how important it is to use less plastic or recycle the plastic we do use so it doesn't end up in our ocean.
2. Make a nature inspired reusable napkin. While disposable napkins and paper towels may not have plastic in them they are often sold in plastic packages. Collect several interesting looking leaves, use fabric paint to add colour to one side. Place the leaf coloured side down on the reusable napkin. Take a rolling pin and roll over the leaf once pressing firmly. Pull the leaf off of the napkin and check out your print!
3. Make a bird feeder or planter using recycled plastic bottles
4. Try making a recycled water bottle wind spiral and hang several of them together in your yard see this link for a how to <http://www.cbc.ca/caregivers/play/view/water-bottle-wind-spirals>

Closing Activity

Go on a walk around your meeting location or a local park. On your walk play I Spy or do a scavenger hunt while looking for litter, pick up any litter you do find. Optional, make a pair of “binoculars” using cardboard tubes to help you spot the litter.

Embers

To earn this Plastic Free Challenge Embers must do the opening and closing activity as well as complete two activities from each theme (At Home, In Your Community and Out in Nature). Once completed send in the completed badge order form with the number of badges required and which activities you did.

Opening Activity

Plastic has really only been around in the last 100 years. What do you think your great grand caregivers used instead of plastic for toys, cooking, storing food, bathing, containers etc?

At Home

1. Help your caregivers make a simple meal without using plastic wrappers, containers or disposable cutlery/dishes. An easy meal would be a fruit salad, remember not to use any plastic produce bags when picking up your produce.
Some ideas are:
 - Homemade play dough – Knead together 2 cups of flour, 1 cup of salt, 1 cup of water and a few drops of your desired food colouring. Store in an airtight glass container between uses.
 - Homemade chalk – in a bowl mix 1 ½ cups of cornstarch and 1 ½ cups of water, pour into a cupcake tray lined with paper liners, add a few drops of food colouring to each cup and mix with a toothpick. Let harden then pop out, unwrap and use.
2. Make a game using recycled plastic items like bottle cap tic tac toe or a shopping bag skipping rope <http://www.pbs.org/caregivers/crafts-for-kids/plastic-bag-jump-rope/>
3. Use recycled number 6 plastic containers to make DIY shrinky dinks <https://www.pinterest.ca/pin/234820568052278987/>

In Your Community

1. Learn what plastics can be recycled in your community and what plastics need to go to a specialized recycling centre or cannot be recycled. A leader or caregiver may need to go online to look up your community's recycling rules. Complete the Recycling Sorting Activity in the resource section based on what is available in your community.

2. In many places plastic bottle caps cannot be reused. Make a trader using plastic pop bottle caps and put it on your camp hat. This turtle, crab or snail could be used making cardstock and bottle caps.



3. Visit a recycling centre or have someone visit your unit to learn about how plastic is recycled. Are there certain types of plastic that are easier to recycle than others? What kinds of things can plastic be recycled into?
4. Draw a before and after picture. The first picture should be of a place in nature filled with plastic waste, what do the animals look like, are there lots of plants, does it look like a nice place to spend time? The second picture should be of the same place in nature but this time with all of the plastic waste picked up. What is different, how do the animals look, does it look like a place you would want to visit?

In Nature

1. Play the save the turtle game in the references section.
2. Make a reusable napkin. While disposable napkins and paper towels may not have plastic in them they usually come in plastic packaging at the store. Collect a bunch of leaves, use fabric paint to add colour to one side. Place the leaf coloured side down on the reusable napkin. Take a rolling pin and roll over the leaf once pressing firmly. Pull the leaf off of the napkin and check out your print! Use your napkin at your next meal.
3. Next time your family or unit goes on an outing, pack a reusable water bottle or reusable mug to put your drinks into along with a plastic free snack (this could be something as easy as a piece of fruit or more involved like a homemade granola bar in a reusable container or wrap). You could even wrap part of your snack in your new reusable napkin.
4. Make a simplified food chain showing how small pieces of plastic can end up inside of large animals. The attached resource has a simple stacking tube food chain or feel free to make your own. Try making your own glue by mixing together $\frac{2}{3}$ cup of flour and $\frac{1}{3}$ cup of water in a glass container to glue the pieces together. Discuss how the smallest pieces of plastic become a big problem for larger animals like whales or even people. Why might an animal like a turtle eat a plastic bag?

Closing Activity

Watch All the Way to the Ocean by Freedom Three Publishing on Youtube

https://www.youtube.com/watch?time_continue=730&v=sZW2ByM623g This video will help you to understand why properly disposing of plastic litter is so important. Then go on a litter clean up in your community, around your school, meeting place or anywhere else.

Guides

To earn this Plastic Free Challenge Guides must do the opening and closing activity as well as complete two activities from each theme (At Home, In Your Community and Out in Nature). Once completed send in the completed badge order form with the number of badges required and which activities you did.

Opening Activity

Learn about how plastic is made. Where do the raw materials come from, how do we extract those materials, how does that become a plastic bag? What happens if we run out of the raw materials for plastic? Why is it so important that we use less plastic? If we keep throwing away plastic or don't recycle it properly what happens to the environment? How are animals affected? How are people affected?

At Home

1. Prepare a snack to share with your unit without using any plastic.
2. Go on a scavenger hunt and find all the single use plastic items in your kitchen (plastic straw, plastic forks, packaging on granola bars etc.) Come up with 10 alternatives (ie. making granola bars at home rather than buying one in a plastic wrapper).
3. Learn about how your grand caregivers stored food before plastic wrap was invented, and how they survived without disposable products. What did they use instead of plastic wrap, plastic cutlery, plastic shopping bags and pre-packaged food? Visit a heritage site or a community museum to learn more.
4. Plastic toys and toys in plastic wrappers have only been popular and easily available since the 1950s. Find out what toys kids played with before this. Try making one yourself. Make a sock monkey, thaumatrope, button spinner or jacob's ladder. Here are two easy quick options to make:
 - Homemade play dough – Knead together 2 cups of flour, 1 cup of salt, 1 cup of water and a few drops of your desired food colouring. Store in an airtight glass container between uses.
 - Homemade chalk – in a bowl mix 1 ½ cups of cornstarch and 1 ½ cups of water, pour into a cupcake tray lined with paper liners, add a few drops of food colouring to each cup and mix with a toothpick. Let harden then pop out, unwrap and use.
5. Play a game of plastic free Jeopardy. Have your patrol come up with categories and answers for a game of jeopardy and play it with the rest of your unit. An example would be - Answer: You use this to drink iced tea once then throw it out. Question: What is a plastic straw?

In your Community

1. Make a poster about the importance of reducing single use plastics and put them up in your school or community.
2. List all of the plastic that comes with fast food meals (spoon, straw, lid, burger wrappers, ketchup packets etc). Get creative and invent a plastic free alternative that a fast food restaurant could use instead. You could draw, sculpt or create the alternative. Make sure you give it a name and write down all the materials you used and label any parts.
3. Make a reusable grocery bag and bring it with you when your family goes grocery shopping. See this link for an easy diy from an old t-shirt https://www.kenarry.com/upcycle-t-shirt-tote-bag/#_a5y_p=5232122
4. Go to your local grocery store and find plastic free alternatives to some of your favourite food or go to the mall and find stores that you can purchase plastic free alternatives at (think clothing, toys, bath and skincare products). Make a list of 10 easy ways to reduce plastic packaging on items you often use.
5. Host a plastic free party for your unit. Make sure you decorate your meeting space appropriately for the festivities! Try making bunting instead of using balloons, make a table cloth out of a piece of fabric and decorate it with fabric paints (reuse it at other celebrations later in the year or at camps). Discuss why balloons are not good for the environment. What happens when someone releases a balloon outside? Where does it go? Can it harm any animals?

In Nature

1. Watch this video Kids take action against ocean plastic that was put out by National Geographic <https://www.youtube.com/watch?v=hKFV9lquMXA> Have a discussion in your unit about what we use Styrofoam for and what sort of alternatives are out there. Learn about how long it takes for styrofoam to break down in the environment.
2. Go on a hike, pack a reusable water bottle or reusable mug to put your drinks into along with a plastic free snack (this could be something as easy as a piece of fruit or more involved like a homemade granola bar in a reusable container or wrap).
3. Make this jellyfish in a bottle to help illustrate how much a plastic bag can look like an animal such as a jelly fish. Discuss how animals such as turtles can accidentally eat plastic bags and why this is bad for them This is a great tutorial, but it may require some adult help https://bhoomplay.wordpress.com/2011/09/09/diy_jellyfish_eng/
4. Get creative and make a wind chime out of all recycled materials. Think about using bottle caps, containers, plastic cups, beads, buttons, old CD's anything you can think of. A quick Google or

Pinterest search for recycled wind chime crafts will give you a ton of ideas to use if you are stuck. This example uses melted plastic cups

<http://mylifeinthenuhouse.blogspot.com/2011/06/rainbow-suncatcher.html>



Closing Activity

We use so much plastic in our daily lives and so much ends up getting tossed into our environment. What will happen if people don't change their habits? Do a litter pick up in a local park. Record all the different types of plastic that you pick up. Did any of this surprise you?

Pathfinders

To earn this Plastic Free Challenge Pathfinders must do the opening and closing activity as well as complete two activities from each theme (At Home, In Your Community and Out in Nature). Once completed send in the completed badge order form with the number of badges required and which activities you did.

Opening Activity

Fast Fact:

From June 03 to 18, 1995, volunteers covering a 307 km coastline in the Maritimes collected more than 100,000 items of trash. Of the total garbage collected, 61.9% consisted of polystyrene and plastic.
Environment Canada, October 1995

Learn how long plastic take to biodegrade. Will the plastic fork you use today disappear before you graduate college? How does single use plastic waste affect animals and people?

At Home

1. Find out what micro beads are and why they are harmful to the environment. Make an exfoliating scrub or face product using only natural ingredients – see this link for a sugar scrub recipe <https://www.bloglovin.com/blogs/u-create-2122944/diy-sugar-scrub-recipes-2770048123>
2. Go one day without using any single use plastic. This will take some preplanning, think about any instances where you might encounter single use plastic during your day and plan alternatives.
3. Did you know that some tea bags contain up to 20% plastic. Loose leaf tea is a plastic friendly alternative. Hold a loose leaf tea tasting with your unit try out some different flavours. Or take your reusable mug to get a cup of tea from a shop that uses loose leaf teas.
4. Make a reusable beeswax wrap and use it in your lunches this week
<https://www.diynatural.com/reusable-food-wrap-plastic-alternative/>

In your Community

1. Research and debate in your unit the benefits and drawbacks of *Single use plastic vs Disposable products made from alternative materials* (ie. Palm leaf plates, paper straws or bamboo cutlery). Take into consideration upfront cost to the consumer, effectiveness of product, how many times it can be reused, how they are made, how they are disposed of and overall environmental impact.

2. Write a letter to a local business or politician about switching to/promoting a plastic free option (café promoting reusable cups)
3. Think of alternative plastic options such as packing reusable cutlery in your lunch vs disposable cutlery. Research the costs of 4 different reusable and disposable products to find out which is cheaper in the short term and the long run.
4. Pets can be a source of plastic waste. Many pet products are made from plastic. Make some dog or cat toys without plastic and donate to a local pet rescue.
5. Research jobs related to plastics development, manufacturing, recycling and disposal in your community and have someone in a plastic related job come and speak to your unit about their career and education or interview them over the phone or email.

In Nature

1. Make a mosaic or piece of art using recycled plastic to show why we need to reduce our single use plastic. Use bottle caps, bottles, containers, plastic bags etc. Display it somewhere in your community.
2. Learn about the dangers of plastic entanglement. Why is it a problem when an animal gets tangled in plastic waste? Think of whales tangled in nets or birds tangled in 6 pack rings. How can we prevent this or help?
3. Plan plastic free meals for your next camp. Try to purchase as many items as possible without plastic, you may need to go to a store that sells bulk products or a farmers' market. Make sure you bring plastic free storage solutions. Some hints to accomplish this task are make and use beeswax wraps instead of plastic wrap, pack glass/metal containers to store leftovers in, and bring mesh bags to the store for produce.
4. Make a sit upon by turning recycled milk bags or plastic bags into "yarn" and weaving or crocheting it together. Use it at your next camp. If you enjoyed this activity you can take it one step farther by making sleeping mats to donate to a local homeless shelter or making other reusable items out of yarn such as tote bags or baskets. Use this link to learn how to make yarn <https://www.liveabout.com/how-to-make-plarn-plastic-yarn-tutorial-1106077> Follow this link to watch a video on how to weave with milk bags https://www.youtube.com/watch?time_continue=1274&v=lp8NHRptU1I

Closing Activity

Many people still throw garbage out their car windows while they drive; this plastic ends up in ditches and waterways and eventually gets swept downstream into the ocean. Organize a roadside litter clean-up for your unit.

Rangers

To earn this Plastic Free Challenge Rangers must do the opening and closing activity as well as complete two activities from each theme (At Home, In Your Community and Out in Nature). Once completed send in the completed badge order form with the number of badges required and which activities you did.

Opening Activity

Fast Fact:

Each Canadian throws away approximately ½ kilogram of packaging daily. In fact, half of our cities' solid waste by volume and one-third of our waste by weight is made up of packaging. *District of Kootenay Boundary, British Columbia*

How can you reduce your plastic waste? Brainstorm ways to reduce your single use plastic at home, at school, when eating out, in your community, while travelling.

At Home

1. Go one week without using any single use plastic. This will take some planning, think about all aspects of your life and where plastics may be involved. Try making something like a DIY lotion bar or DIY shampoo to help cut down on your plastic usage.
2. Research reusable menstrual products. During shoreline clean ups one of the most often found piece of plastic is tampon applicators. This is because the average woman will use 9,600 menstrual products in her lifetime. What sort of reusable options are available? Are there certain circumstances that would make one option more desirable than another? Are there products for swimming/sports? Find out what the cost of purchasing a cycles worth of reusable products (that would last 5 years) vs the cost of buying disposable products for 5 years. An optional add on would be to make or buy reusable pads or period panties and try them out.
3. Go through your bathroom and make a list of all disposable plastics (toothbrush, shampoo bottle, q tips, makeup wipes etc) and research what products can be used to replace them. Make a product and use it. One idea is to make reusable makeup wipes see this link for diy <http://www.lovmadehandmade.com/2017/04/28/100-cotton-rounds-make/> (these could also be sewn by hand)
4. Use your sewing skills or learn to macramé or crochet and make some reusable produce bags to shop with. Try using them at your local farmers market or grocery store.

In your Community

1. Check out Instagram or youtube makeup vloggers and see all the glitter used at festivals and in makeup. Why is glitter not so good for the environment and are there environmentally friendly options? Can you make some?
2. Plan an event for a Sparks or Ember unit to help them earn this challenge.
3. Research the straw ban in Vancouver and debate the benefits and drawbacks (ie. ableism, cost to companies and consumers). Will banning plastic straws save the environment or is this a small step without lasting long-term benefits?
4. Write an in-depth blog post (with pictures and infographics) or create a public service announcement (using a program like iMovie) about reusable vs. disposable products
5. Research the trash free movement, watch this video <https://www.youtube.com/watch?v=nYDQcBQUdpw> and discuss if this is a realistic way to live. Would this be something that you could do? What benefits are there to living trash free? What drawbacks or difficulties would there be in living trash free?

In Nature

1. Document the problem with plastic through art. Use photography, sculpture, paints, printmaking, textile arts, poetry, dance or any art form you are interested in. Write a poem or short story about plastic usage. Host an art show and invite your friends, family and/or local community to view your artwork or listen while you recite/read your poem or story.
2. Try growing your own produce so that you don't need to use plastic bags at the grocery store. Find a way to use recycled items such as old pots or buckets as planters. Research what will grow well in your area and plant some seeds. Or visit a community garden association and talk to them about the environmental benefits of growing your own local food.
3. Make a nature impression jewelry bowl using salt dough. Make sure you buy your flour and salt in a way that doesn't use plastic. Try bringing glass jars or fabric bags (flour sacks) to a store that sells bulk products. See the resource section for salt dough instructions, use items from nature or around the house to make impressions.



4. Make a sit upon by turning recycled milk bags or plastic bags into “yarn” and weaving or crocheting it together. Use it at your next camp. If you enjoyed this activity you can take it one step farther by making sleeping mats to donate to a local homeless shelter or making other reusable items out of yarn such as tote bags or baskets. Use this link to learn how to make yarn <https://www.liveabout.com/how-to-make-plarn-plastic-yarn-tutorial-1106077> Follow this link to watch a video on how to weave with milk bags https://www.youtube.com/watch?time_continue=1274&v=lp8NHRptU1I

Closing Activity

Did you try any activities that you will continue to use?

Organize a litter clean-up for your community in a popular beach location or a busy park near a water source such as river, stream or lake. Post flyers advertising the event, get the word out using social media or ask a radio station to promote it. Or plan a district wide clean up, write a letter to your district council asking other units to get involved.

Resources

How to make a salt dough bowl/tray

1. Make your salt dough: mix 2 cups of flour, 1 cup of salt and 1 cup of water. Mix together the flour and salt and slowly add in the water kneading it together as you go. Note: you might not need all of the water.
2. Roll out the dough until it is about 1cm thick. Press in your leaf or item, you will need to press quite firmly and press down on all the edges.
3. Use a knife to cut the shape of bowl or tray that you would like.
4. Put a small oven proof dish upside down on a baking tray and place the salt dough on top of it. This will create the shape of your item, pay attention to make it exactly what shape you would like.
5. Bake the bowl/tray at 100 degrees Celsius/210 degrees Fahrenheit for several hours depending on the thickness.
6. If you don't have an oven safe bowl or if you are working with a large group/entire unit you can leave the bowl/tray out to air dry, this will take several days

References

<http://www.fundyrecycles.com/solid-waste/education/school-programs/statistics/>
<http://divacup.com/eco-divas/>

Program Connections

Activities from this challenge can be counted as activities, instant meetings or even a challenge in several areas of the Girls First program including:

Take Action

Experiment and Create

Connect and Question