



WASTE



GETTING AROUND



RESEARCH + REFLECTION



HOME ENERGY



FOOD CHOICES



GO GREEN

# CLIMATE CHALLENGE

WATER



REGIONAL DISTRICT OF NANAIMO



BRITISH COLUMBIA Sustainable Energy ASSOCIATION

COOL IT! CLIMATE LEADERSHIP TRAINING

# CLIMATE CHALLENGE

Name:

Teacher:

Parent/Guardian signature:

1. GETTING AROUND 2. FOOD CHOICES 3. HOME ENERGY 4. WASTE 5. WATER 6. GO GREEN 7. RESEARCH + REFLECTION

## 2.1 TASTY LEFTOVERS

Re-use leftovers 3 times. I ate:

- 
- 
- 

## 1.1 CAR SMART

Learn about electric cars, cargo-bikes, and active transportation and complete two of the actions in the information page below.



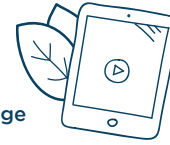
## 6.2 BEE FRIENDLY

Protect your local bee population by building a bee bath using the instructions in the information page below.



## 7.1 GAMING FOR NATURE

Watch two videos or play two of the games and complete the actions in the information page below.



## 7.2 LOCAL CLIMATE ACTION

Do some research and find out what local climate action is happening at your school and in your community.



## 7.4 COMMUNITY EXPLORATION

Map your community and think of ways to make it more sustainable using the instructions and actions in the information page below.

## 6.3 GO BIO

Make a biodegradable cleaning or bath product.

I made:

## 2.2 LOCAL FOOD

Use locally sourced ingredients in meals. I used:

- 
- 

## 7.5 COMMUNITY ACTION

Research the Regional District of Nanaimo's website for the top 5 climate actions you can take in your home.



## 5.1 WATER WISE

Learn about water conservation and calculate your household's daily water consumption.

My family consumes of water per day  litres

## 2.4 GROW YOUR OWN

Plant garden veggies, balcony or windowsill plants.

I planted:

## 1.3 LOCAL VACATION

Plan three local vacations with a small carbon footprint. Where could you and your family vacation locally?

## 4.1 MORE THAN RECYCLING

Reuse/swap/up-cycle instead of throwing stuff away or buying new. I did:

## 6.1 NATIVE TREES & PLANTS

Learn about native plants and, if can, plant some of your own.

A native plant I planted or researched is:

## 3.1 EARTH HOUR

Have an Earth Hour at home, with friends or at school. Use the time to do some of the other challenge actions.



## 7.6 CLIMATE REFLECTION

Write a short reflection on the future and complete the actions in the information page below.



## 3.2 GET EFFICIENT

Use the resources in the information page below to learn how to be more energy efficient at home.



## 5.2 ADOPT A STORM DRAIN

Clean up a storm drain in your neighborhood to prevent flooding after it rains or snows.



## 1.2 TRAVEL SMART

Swap the car for public transit, walking or biking.

I will go to:

by:

## 2.3 LOVE VEGGIES

Have one meat-free day per week or give up eating beef and lamb for one week.

- meat-free days
- didn't eat beef/lamb



## 5.3 EVERY DROP COUNTS

Aim for at least 4 showers of 4 minutes or less.

My showers are  minutes shorter now.

## 7.7 YOUR OWN IDEA

Come up with your own activity for reducing our environmental footprint.

I did:

## 7.3 LIFE CYCLES

Sketch a life cycle of a household item and complete the actions in the information page below.



## 4.2 HOME WASTE

Do an audit of your garbage bins at home and complete the actions in the information page below.



## 3.3 STAY SNUG

Turn down the heat in your house and shut your curtains four times each week.



# CLIMATE CHALLENGE

## INSTRUCTIONS:

1. **Print** the Climate Challenge pack or hand-draw it on paper
2. **Fill in** your name and teacher at the top
3. Look at all of the activities and choose the ones you would like to do over the next **4 weeks**
4. The aim of the challenge is to complete **10 or more actions** and the more you get, the higher your chance of scoring PRIZES!
5. Choose an action to complete on the Challenge Card. Using the action name and number in the top right hand corner of each square to guide you, find more information in the following pages with advice and instructions on how to complete the action as well as extra resources and space to write answers and show your work
6. Once you have done the action **put a cross through that square as complete**, if there is a space, **write the answer** if there is an answer required
7. There are lots of links to extra resources included in the challenge so make sure you **save a digital copy** so you can access these resources as you go
8. Once you have finished get your parents/guardian to **enter their name in the parent signature box** to confirm you completed the actions
9. **Send a scanned copy or photo** of your completed challenge card to your teacher at the end of the 4 weeks

We have **PRIZES** for top students and every Challenge Card we receive back will be entered into a special prize draw! So enter your card no matter how many squares you completed

 = Lower climate impact

 = Medium climate impact

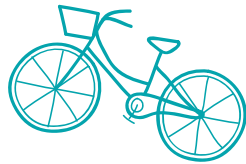
 = High climate impact

## BONUS POINTS

We would love to see what you did! Share some photos with the BC Sustainable Energy Association and there will be a special prize for the best photo! [cool-it@bcsea.org](mailto:cool-it@bcsea.org)



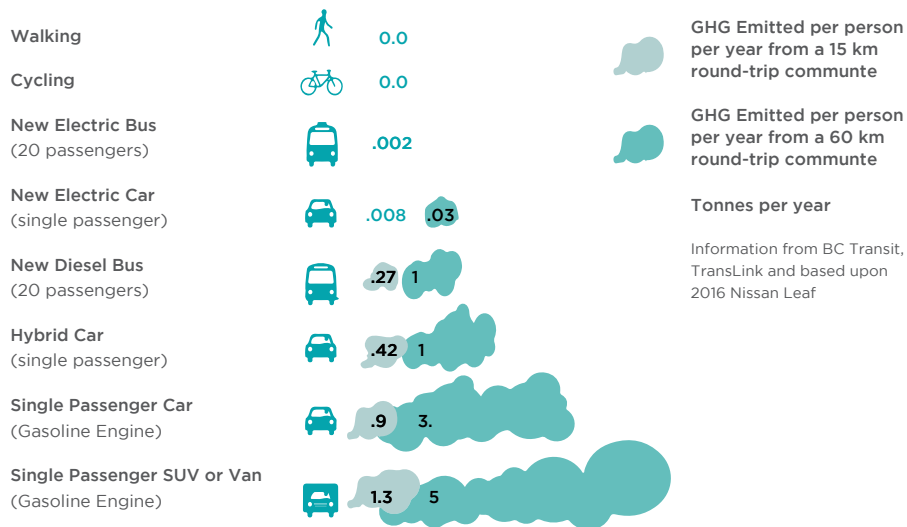
# GETTING AROUND



## 1.1 CAR SMART



Many of the routes that we drive are only a few minutes away and we could walk, bike or take the bus instead. There are many different types of electric and hybrid vehicles that result in far less greenhouse gas emissions.



**Did you know?** For many people in BC, driving gas-powered cars is the main way we create greenhouse gas emissions. Across the world pollution from transport is a large contributor to climate change.

Choose **two** of the actions below:

- Learn about electric vehicles: Electric and hybrid vehicles result in much less (if any) greenhouse gas emissions compared to gas and diesel powered vehicles. [Explore Plug In BC's](#) resources on electric vehicles and list three things that you learned:

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

- EV charging: visit [Plug Share](#) and find the closest electric vehicle charging station to your home. Is there an EV charging station close to your home?

\_\_\_\_\_

- Learn about E-bikes and rebates: Visit [Plug In BC](#). How much can an individual save on a new e-bike by participating in the BC SCRAP-IT program?

\_\_\_\_\_

- Instead of taking short trips by car, choose to walk and bike instead. Tell us a short story or draw a picture of a time that you or your family took a short trip using a bike, walking, or some other form of human powered transport:

## 1.2 TRAVEL SMART

Half of your family's carbon dioxide pollution comes from how you get around. Your family can make its climate impact much smaller by walking, biking, skateboarding, scootering, public transit or carpooling instead on short routes.

1. Make a map of a route that you normally go by car using [google maps](#)
2. Plan how you can go by public transit, walking or biking
3. Try out your new route!

Check what public transport resources your municipality has to help you plan your journeys, such as [BC transit](#)

*circle mode of travel used*

1. I traveled to \_\_\_\_\_ by public transit / walking / biking
2. I traveled to \_\_\_\_\_ by public transit / walking / biking

## 1.3 LOCAL VACATION

Family vacations, especially those that involve traveling far away by car, ferry, or plane, have a large carbon footprint. Your family can make its climate impact much smaller by choosing to vacation locally.

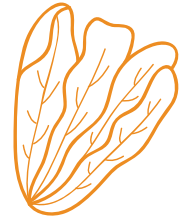
**Did you know?** A family of four on a round trip flight to Mexico City from Vancouver generates 5.13 tonnes of carbon emissions.

List two ideas for close-to-home vacations that you could do with your family.

1. \_\_\_\_\_
2. \_\_\_\_\_

Use [this link](#) to calculate how many emissions would be created from your local vacation ideas.

# FOOD CHOICES



## 2.1 TASTY LEFTOVERS

Across the world, half of all food is wasted every year. We buy too much and food spoils, and we waste leftovers.

**Did you know?** Decomposing food in landfill emits methane, a powerful greenhouse gas that traps heat in the atmosphere.

- Check out [Love Food Hate Waste](#).
- Instead of throwing away leftovers from meals, put them in the fridge or freezer and eat them the next day, or use them in a different meal
- Plan your weekly meals and buy only enough for what you plan to make
- As a last resort, compost your food scraps or leftovers to reduce the amount of methane produced by decomposing food in our landfills.

These were the leftovers I ate / added in a new meal:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## 2.2 LOCAL FOOD

Fruits, vegetables and other foods that were produced in another country will have been transported to us by plane, truck or ship. Transport is a huge contributor to climate change as it emits greenhouse gases and burns fossil fuels.

**Did you know?** On average food travels 2,500 km by trucks, ships and airplanes. This is like traveling from Vancouver to Squamish 40 times in a row!

In grocery stores and supermarkets, read the signs or stickers on the fruit or vegetables, and labels on packaged and canned food. Try to choose food that was grown locally, in BC, or in Canada or even better try getting some of your fruit and veggies from a local farmers market or direct from a farm stand or farm store.

Each week choose locally-produced fruits, vegetables and other ingredients for your food. List some of the local food items you ate:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## 2.3 LOVE VEGGIES

- Choose a day of the week (i.e “Meatless Monday”) and on that day, every week, swap all meat for alternatives like beans, peas, chickpeas, lentils, tofu, tempeh, falafels, mushrooms, quinoa, peanuts, nuts, seeds, and plant-based meat alternatives.














OR

- Go at least one whole week without eating beef or lamb.

**Did you know?** Animal products make up 27% of the North American diet. Meat and dairy production are responsible for 18% of global greenhouse gases, especially methane - a powerful greenhouse gas.

Check out these resources for great recipes:

- [Meat Free Monday’s meal recipes](#)
- [Chef Jamie Oliver’s Meat Free Monday resource and cookbook](#)
- [Canada’s Food Guide Recipes](#)

	FOOD	IMPACT	COST
LOW	Wheat		\$
	Corn		\$
	Beans, chickpeas lentils		\$
	Rice		\$
	Fish		\$\$\$
	Soy		\$
	Nuts		\$\$\$
	Eggs		\$
MEDIUM	Poultry		\$\$
	Pork		\$\$
	Dairy (milk, cheese)		\$\$
HIGH	Beef		\$\$\$
	Lamb & Goat		\$\$\$

These are the meat-free or beef/lamb-free meals my family and I cooked:

1. \_\_\_\_\_
2. \_\_\_\_\_

## 2.4 GROW YOUR OWN

Choosing local food can reduce your carbon footprint, and supports local farmers and food security.

Even better – grown your own veggies and you’ll learn a neat skill and reduce your environmental footprint at the same time!

- If it’s too cold outside, start some seeds indoors to plant in the spring or plant a seed in a container and grow it on your windowsill
- In an apartment? try planting some flowers or pollinator-friendly plants on your porch or windowsill
- Grow herbs or a potato on your windowsill

Here are some resources to help you out:

- Find out how to grow a [windowsill potato](#)
- See [what you can grow and when](#) on Vancouver Island

Tell us or draw what you planted:

# HOME ENERGY



## 3.1 EARTH HOUR

Earth Hour is an event which millions of people around the world participate in by switching off their lights and shutting off appliances to show their support of solving the problem of global warming by way of reducing light pollution, and energy usage.

Do your own Earth Hour at home (e.g. 6pm – 10pm):

- Turn off all lights, electronics and appliances for at least 1 hour (for example between 7 - 9pm one night).
- Put on a sweater and lower the thermostat.
- Have a candle-lit dinner, tell stories, play board games and have flashlights available.

Each week have an Earth Hour. How many Earth Hours did you do?

We had \_\_\_\_\_ Earth Hour(s) in our home the evening(s) of \_\_\_\_\_

An Earth Hour is a great time do some of the other actions in this challenge like:

- Learning about your home’s energy sources and efficiency with **3.2 Get Efficient;**
- Plan a local vacation with your family with **1.3 Local Vacation**
- Writing a climate reflection by yourself or with your family with **7.6 Climate Reflection**



### 3.2 GET EFFICIENT

Check the resources below to find out how you can make your home more energy efficient:

- Take this [quiz](#) to learn what uses the most energy in our homes and how you can save energy
- Research [CleanBC Better Homes](#) - information about reducing your home greenhouse gas emissions, and financial support for making your home more energy efficient
- [Learn about heat pumps](#) and how they can be used to heat your home more efficiently.
- What rebates are available to your family to upgrade to a heat pump at your home?
- Use the free Energy Coach Service available if you have any questions or want to see what you can do with your home: [ask@betterhomesbc.ca](mailto:ask@betterhomesbc.ca) or **1-844-811-9790**


List three things you can do to make your home more energy efficient:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Did you know?** In most places in BC, between 10-20% of an average person's greenhouse gas pollution comes from their home!

Find out which energy sources are used in your home and list them below. Put an **F** beside them if the source is a **fossil fuel** or an **R** if the source is **renewable**

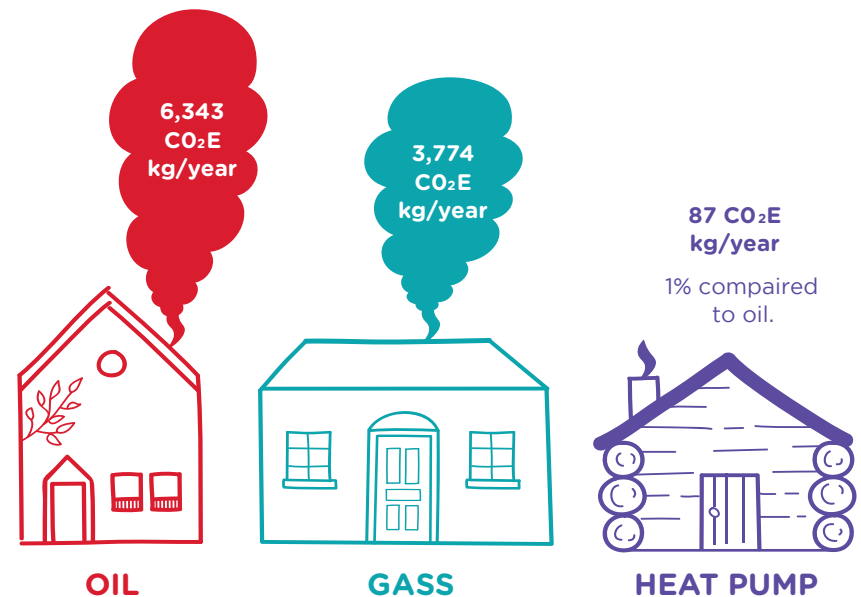
**Tip:**

 Higher Greenhouse gas emissions (these are fossil fuels/ non-renewable) = Natural gas, heating oil, propane

 Lower greenhouse gas emissions (these are renewable resources) = Electricity from BC Hydro, solar, wood, biogas

List some of the energy sources in your home and record if they are **F** or **R** :

Energy source	F or R :
1. _____	<input type="checkbox"/>
2. _____	<input type="checkbox"/>
3. _____	<input type="checkbox"/>





### 3.3 STAY SNUG



How we heat our homes has a huge impact on our environmental footprint. In BC we often use fossil fuels to heat our homes (gas or oil), or inefficient electrical heating which is expensive.

- Turn down your thermostat to:

**20°C** while you are at **home**

**18°C** while you are **asleep** at night

**16°C** when **no one is home**.

**Did you know?** According to BC Hydro, heating costs rise about 5% for every degree above 20°C that you set your thermostat. This can save your on family's home heating bills.

- Put on some more clothes if you're cold.
- Close your curtains each night when it's cold to keep it warm, and during the day in summer to keep it cool.
- Do these actions at least four times a week, or even better - every day, for the whole 4 weeks.



## WASTE



### 4.1 MORE THAN RECYCLING



By volume, 80% of everything we buy ends up in the landfill or recycling facility within 18 months!

Most of this is plastic or styrofoam packaging, bottles and single-use items (take-out containers, straws, cups, lids, utensils).

Choose one/some of these actions:

- Repair an item instead of throwing it away and buying a new one
- Borrow or rent something instead of buying something that you need for a short time (such as tools, cooking equipment). Remember to sanitize it carefully!
- Upcycle something that you were going to throw away. This means make it into something else

**Did you know?** As plastic breaks down it creates methane, which is a greenhouse gas that traps 30 times more heat in the atmosphere than carbon dioxide. Plastic litter also pollutes water, shores and animals eat them by mistake.

### 4.2 HOME WASTE



Do an audit of your garbage bins at home:

- Do you have 3 bins to separate your waste - a garbage/landfill bin, a composting/green waste bin, and a recycling bin?

Yes      or       No

- If your answer is no, ask your parent/guardian if you can you start separating your waste like this.



- Have a look through your bins. What items are in the wrong bins?

---

---

---

---

I put the items I found in the correct bins

- Research these links to learn more about how to recycle properly in your area:
  - Want to throw something away but not sure which bin it should go in? Visit [Myrecyclopedia](#) if you are on Vancouver Island, and [Waste Wizard](#) if you are in Vancouver.
  - Try this [recycling game](#) to boost your waste knowledge

# WATER



## 5.1 WATER WISE

Water is an important resource that we do not want to waste! Reducing your water use means lower water and energy bills and a smaller impact on the environment. Plus, being water wise in your home helps to maintain our regional water supply. Over the next 50 years, British Columbia is expected to experience longer and dryer summers because of climate change, which makes conserving water even more important.

- Use this [Water Calculator](#) to find out how much water your household uses and how you can use water more efficiently.
- How many liters of water does your household use per day?

\_\_\_\_\_ litres

## 5.2 ADOPT A STORM DRAIN

Storm drains play an important role in protecting our neighborhoods from flooding during extreme weather events. Storm drains can become cluttered with leaves and waste from the street. Go for a walk and find a storm drain in your neighborhood.

The next time it rains or snows, check on the storm drain and safely clear it of any debris.

The date I cleared my neighborhood storm drain was:

---

**Did you know?** With climate change, it is expected that we are going to see more rain in coastal areas of British Columbia.

## 5.3 EVERY DROP COUNTS

One of the ways that you can reduce your water use is by taking shorter showers and by turning off the water when you are lathering up with soap. By showering quickly, you are conserving water, lowering your bills, and reducing your environmental impact.

Aim to have a shower in 4 minutes or less at 4 times during the challenge

Each week, record your time and try to keep improving that time!

1. My showers are now \_\_\_\_\_ minutes
2. My showers are now \_\_\_\_\_ minutes
3. My showers are now \_\_\_\_\_ minutes
4. My showers are now \_\_\_\_\_ minutes

Learn more about other things you can do to [reduce your water use at home](#)



## GO GREEN



### 6.1 NATIVE TREES AND PLANTS

Native plants provide shelter and food for local wildlife, support pollinators like bees and butterflies, and are better adapted to our local environment.

Check out this [guide](#) to gardening with native plants on Vancouver Island.

Then [click here](#) to learn about native plants that support our local birds and butterflies. List three native plants that interest you and one interesting fact about each of them:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

- If you have a yard, garden, or porch where you could grow some native plants why not plant some during growing season?
- You could also talk to your teacher about growing some native plants at school!

**Did you know?** One mature tree can absorb up to 22 kilograms of carbon dioxide per year. Planting trees in your backyard or community spaces can help to reduce air conditioning bills by providing natural shade and cooling your backyard in summer, and reducing wind in winter so you don't need to heat your house as much. They also cool down our streets which are filled with heat-absorbing asphalt.

## 6.2 BEE FRIENDLY

Bees are essential to our local ecosystems. They support the growth of trees, flowers, and other plants that provide food and shelter for other animals and insects. Bees also play an important role in food production by pollinating flowers which grow the fruits, seeds and nuts that we eat.

However, climate change is threatening bee populations because of rising temperatures and changing growing seasons.

Help our buzzing friends stay happy and hydrated by building a [bee bath in your garden](#), backyard, or on your porch.

When you're finished, draw a picture of your bee bath below:



## 6.3 GO BIO

Many cleaning products contain harmful chemicals that cause pollution inside and outside the home, threatening water quality, our wellbeing, and wildlife.

**Did you know?** Did you know that you can easily make non-toxic cleaning and beauty/bath products like shampoo and soap at home with a few cheap ingredients? Making your own products saves money, reduces toxic chemicals in our environments, and reduces your plastic trash as you can keep reusing the containers!

- Choose a recipe from the resource list below
- Make a biodegradable, natural cleaning product or bath/beauty product

I made: \_\_\_\_\_

- Check out these resources for ideas of what you can make:
  - Check out some [Green Cleaning](#) recipes
  - Check out [the advice](#) from our friends on Vancouver Island



# RESEARCH & REFLECTION



## 7.1 GAMING FOR NATURE

Learning about climate change doesn't have to be all facts and data! There are so many fun and interesting online resources to help us learn about sustainability and climate change.

1. Choose some games/videos from the links below.
2. Watch at least two videos or play two of the games below and learn about nature, climate change, energy and waste.

### Games:

- If you're on Vancouver Island check out the amazing resources, including [games and activities](#)
- Learn about recycling with [Recycle City games](#)
- Play [Coral Bleaching](#) and learn about how climate change is affecting the oceans
- Play [A Tale of Two Soup Cans](#) and learn about where your waste goes
- Play [Wild City Search](#) and learn about biodiversity in cities

### Videos:

- Learn about energy and watch [The Surprising Places We Waste Energy](#)
- Learn about plastic waste and where it goes and watch [What really happens to the plastic you throw away](#)
- Learn about how you can take action and watch [I'm only a kid, I can't do anything about climate change.... Right?](#)

I played/watched the following two games/videos:

1. \_\_\_\_\_
2. \_\_\_\_\_

I learned the following two new facts:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Now, I want to make change by taking the following actions:

---

---

---

## 7.2 LOCAL CLIMATE ACTION

Communities across BC are taking lots of local climate action - here are some tips to find out more and learn how you can get involved.

1. Research some local climate and environment groups in your area and what actions and initiatives they do. List the any groups you find below.

Name of the group	What they do
_____	_____
_____	_____
_____	_____

2. Find out if your schools has a environment or sustainability club

Has it?  Yes or  No

3. Find out if your school has taken any climate actions. If they have list them below:

---



---

4. Explore these resources to learn more about climate change and its impact in BC:

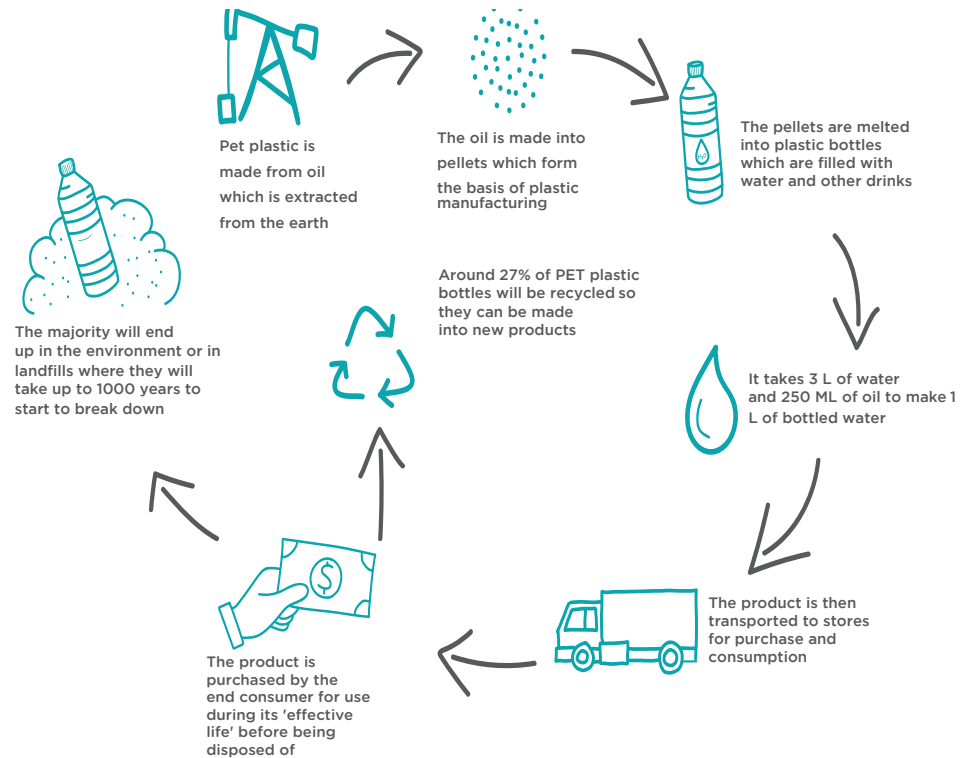
- Check out [The Climate Mobilization](#) to find out if your city has declared a climate emergency
- Check out [how our temperatures are rising](#) with climate change across BC

## 7.3 LIFE CYCLES

Everything that we buy is a part of our carbon footprint. It takes lots of resources to make the things we buy - like plastic is made from oil, a non-renewable resource. It also takes energy to manufacture things, and trucks, planes and ships to get them to us.

All of this creates carbon pollution. Many things we buy have to go somewhere once we are finished using them - and lots of these items end up in landfill.

Here is an example of a life cycle:



1. Watch the videos below to learn more about life cycles and tell us one thing you learned from the video

- Learn about the [Life Cycle of a Plastic Bottle](#)
- Learn about the [Life Cycle of a T-shirt](#)

---

---

---

---

---

---

---

---

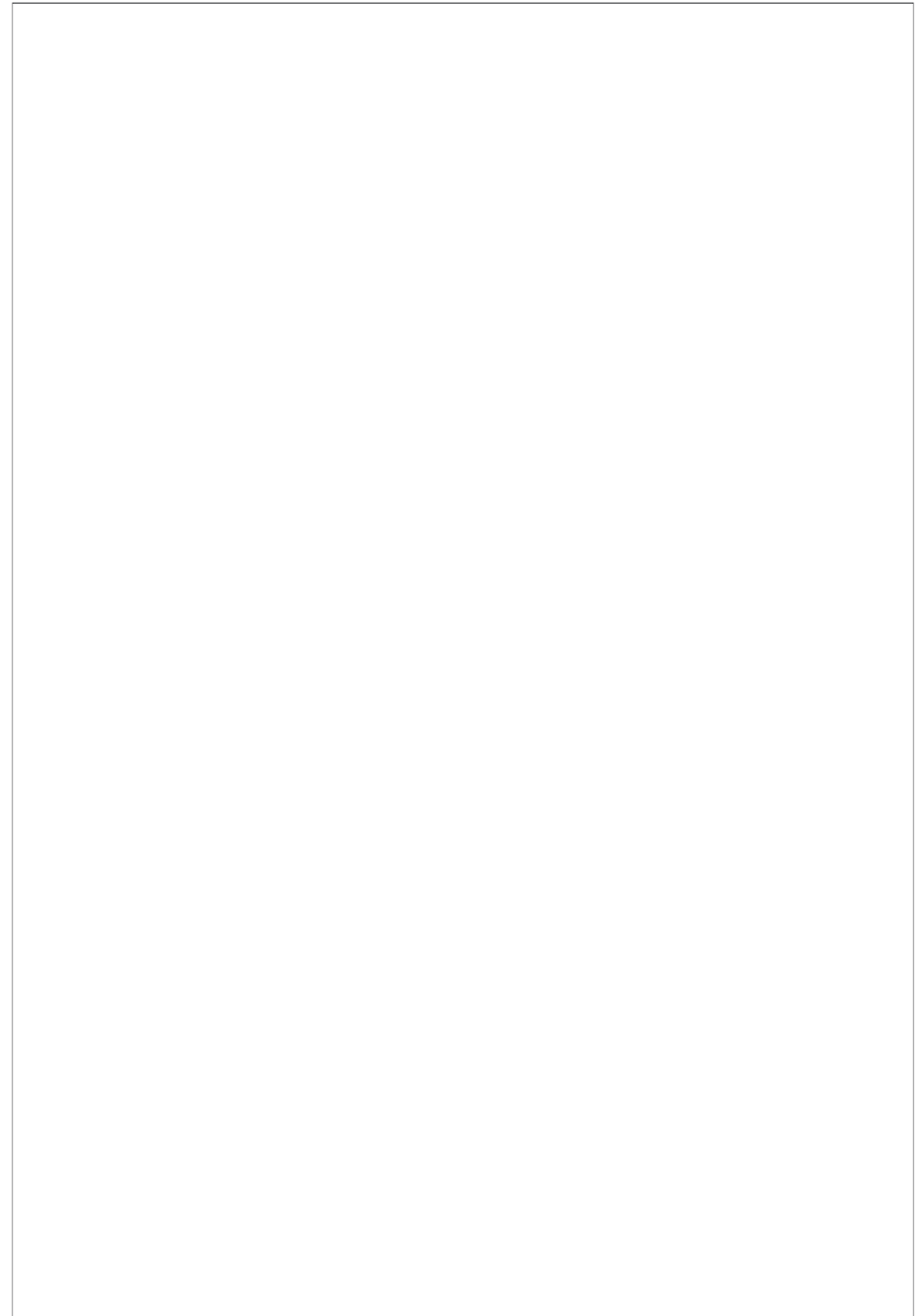
2. Choose one item in your household and figure out where it was made (look at tags on clothing, look at labels on packages, do a google search)

3. Find out/guess what it's made from - plastic, cotton, metal etc

4. Think about how your item has contributed to climate change

5. Think about something you can do to reduce contributing to climate change through the things that you buy and use - could you buy something locally, or choose a product made from wood or natural materials instead of plastic/oil? Instead of throwing it away could you use it for something else or make it into something else? Can it be recycled?

**Draw your life cycle image:**





## 7.4 COMMUNITY EXPLORATION

Make a map of your surroundings to figure out what assets (useful, valuable things) you have around you, and where the gaps may be, and how your community could be more sustainable.

You can use this information to ask your local leaders to improve things in your neighborhood to help tackle climate change. Use the prompts below and draw your map here or attach a bigger version to your final challenge form:

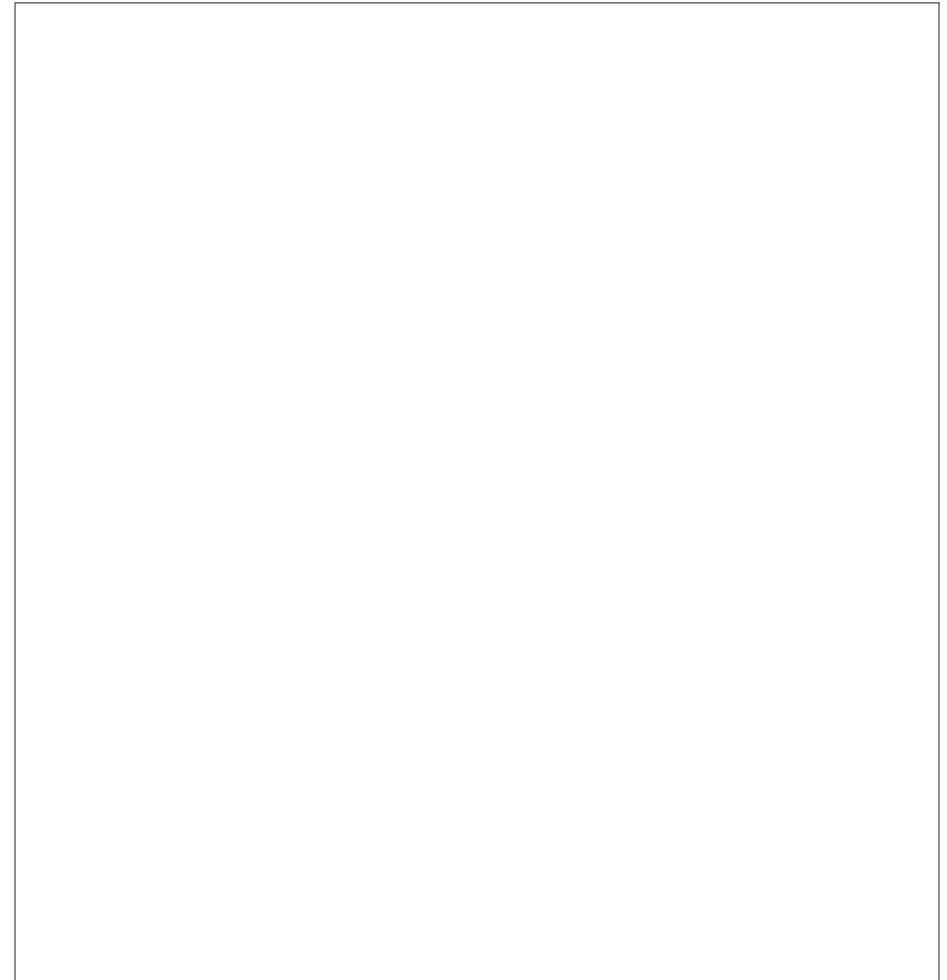
1. Draw a simple map of your neighborhood. Add in the main things in your community, such as your house, school, the local store, the main road etc
2. Add everything you think that is related to climate change and the environment:
  - a. Think about transport - are there bike-lanes and places to park your bike? Is it pedestrian-friendly? Are there enough buses?
  - b. If you're interested in food - do people have space to do their own veggie gardens? is there a community garden? are there farmers markets or local grocers?
  - c. Are there enough trees? Are many of them native? are there many birds, bees and biodiversity?
  - d. Do many homes have solar panels? do people recycle? do they water their lawns a lot?
3. On your map in a different color sketch 3 ideas for improving your neighborhood and making it more sustainable and list your three ideas below:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**Draw your map here:**



4. Why not email or write a letter to your local leaders with a copy of your map and some of your ideas?
5. Check out the [Climate Atlas of Canada](#) and learn how climate change is affecting Canada

**Did you know?** You can learn about what amazing technologies are out there to improve the sustainability of our communities with the [Student Energy Systems Map](#)

## 7.5 COMMUNITY ACTION

Visit the Regional District of Nanaimo's website and research their suggestions for the **top 5 climate actions you can take in your home.**



List some of the actions from that list that you and your family have taken in your home:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

## 7.6 CLIMATE REFLECTIONS

Sometimes we can feel overwhelmed by climate change and what a huge, daunting problem it is. Rather than getting overwhelmed and choosing to do nothing at all, it is better to focus on the things that we can change, no matter how small.

- Write a short reflection: How do you feel about the future, do you think the future is looking good or bad?

- Write down 3 problems that you think we need to solve.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

- Think about your future career and job that you want to have. what can you do through this job to tackle climate change and some of the problems you listed above?
- Learn about how you can take action and watch **I'm only a kid, I can't do anything about climate change.... Right?**

## 7.7 YOUR OWN IDEA

We want to know what you think other people or communities can do to reduce their greenhouse gases and help tackle climate change.

Come up with your own idea or share an activity that you did that is NOT on the bingo card

Tell us what you did:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**BONUS POINTS:** send a photo of what you did! - [cool-it@bcsea.org](mailto:cool-it@bcsea.org)