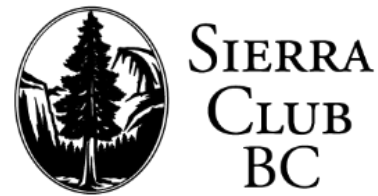


Creating a better climate future for B.C.



A Teaching Toolkit for Grades 6-8

About this Toolkit

This toolkit outlines ten steps for B.C. to take towards a future with a stable climate, a healthy environment and prosperous communities.

We wrote this toolkit with students in grades 6-8 in mind. However, we also feel that many, if not all, of the activities can be adapted both for lower and higher grade levels.

How to use this Kit:

The toolkit was inspired by Sierra Club B.C.'s recent publication [*The Future is Here!*](#) This document outlines Sierra Club BC's vision for a better climate future for B.C.

We've created 10 infographics to explain the 10 steps. We hope the graphics will provide a platform for discussion for you and your students, especially in the wake of the 2015 UN Climate Conference (Cop 21).

We've also put together sample lesson plans and activities to accompany each of the ten infographics. The lesson plans are meant to provide you with ideas about how to structure your class discussion about each of the ten "steps", creative and kinesthetic ways that you can have students learn key concepts, and questions to prompt student reflections.

Together the 10 graphics and accompanying lesson plans could constitute a whole unit on climate change and how we can build a better climate future together.

- 1) Visit our webpage and share the infographics with your students
- 2) Select the accompanying lesson plans or activity from the **Table of Contents** below (ctrl+click on each item in the Table of Contents to jump to the relevant lesson plan).

About the co-creators

This toolkit was put together by two of Sierra Club B.C.'s inspired and creative staff.



Anna Kemp is a communications specialist for Sierra Club B.C. with a passion for helping teachers and parents foster environmental values in all B.C. kids.

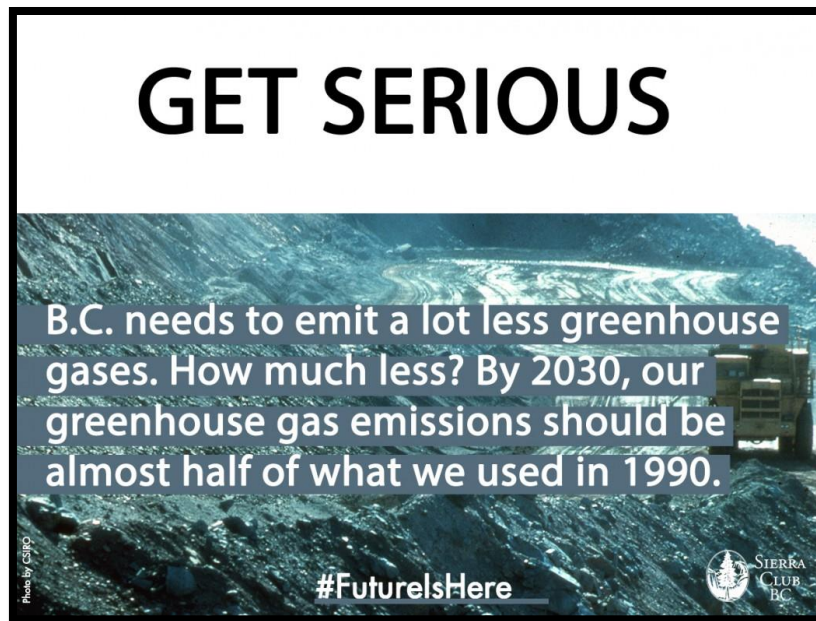


Lisa Dumoulin is Sierra Club B.C.'s Education Program Coordinator. Lisa is excited to offer teachers a resource that will help to spur discussions, deepen learning, and inspire student action on climate change.

Table of Contents

About this Toolkit.....	1
How to use this Kit:	1
About the co-creators	1
<u>1. Get Serious:</u> B.C. needs to commit to emitting a lot less greenhouse gases. How much less? By 2030, our use of greenhouse gases should be almost half of what we used in 1990.	3
<u>2. Make Polluters Pay:</u> When people and businesses use fossil fuels they pay a small tax. By increasing this tax over time, more companies will try to use clean energy sources. More people will want to ride the bus, bike, or carpool rather than always driving in cars.....	5
<u>3. Use solar, wind and tidal energy now!</u> We can make a big difference by reducing our energy use and by using energy that doesn't burn fossil fuels.	7
<u>4. If it makes climate change worse, don't do it!</u> B.C. needs a climate 'report card' for new energy projects like dams, mines, and pipelines. If they get a failing grade, they shouldn't happen.....	11
<u>5. Keep fossil fuels in the ground:</u> We don't need to burn all of the fossil fuels out there. In fact, we need to make sure that we don't. Our future depends on it.	13
<u>6. Nature needs more:</u> Wildlife and ecosystems need enough space, protection from pollution, and protection from other human threats in order to adapt and survive.	16
<u>7. Respect Aboriginal Rights and Title:</u> Any policies affecting lands, waters, and resources in Canada, need to be made in full partnership with First Nations, Inuit, and Metis nations.	19
<u>8. Create a Forest Action Plan:</u> Healthy forests provide food and shelter for tons of living things, they clean our water, and they help reduce climate change. We need to better defend B.C. forests.	21
<u>9. Reconnect with nature:</u> Spend time outside! Learn about your local environment and all the amazing things that are part of it.....	24
<u>10. We need to adapt:</u> B.C. needs a plan for adapting to climate change impacts already happening. ...	25

Get Serious: B.C. needs to commit to emitting a lot less greenhouse gases. How much less? By 2030, our use of greenhouse gases should be almost half of what we used in 1990.



Teaching this

Background info:

- In 2013 B.C. counted its emissions from all sources* as: 64.0 megatonnes carbon dioxide equivalent (Mt CO₂e).
- In 1990 B.C. counted its emissions from all sources as: 52.0 megatonnes carbon dioxide equivalent (Mt CO₂e).

Data from: <http://www2.gov.bc.ca/gov/content/environment/climate-change/reports-data/provincial-ghg-inventory-report-bc-s-pir>

Activity: Reducing our Greenhouse Gas Emissions – a demonstration

- 1) Ask students about greenhouse gases. What are some sources?
- 2) Demonstrate the difference between contemporary emissions (64 megatonnes) and 1990 levels (52 megatonnes) by pouring 640ml and 520ml of water into two different 1L measuring cups. Label the cups 1990 emissions and 2013 emissions.

OPTIONAL: To enhance learning, demonstrate the sources of all the emissions by using smaller beakers to represent the different “sources” of greenhouse gases. See the chart below for how many ml to have in each beaker (or, if appropriate, have students calculate the volume of each source). Label the beakers. You can also use food colouring so that each source of greenhouse gas emissions is represented by a different colour.

- 1990
 - 10% deforestation – 52ml
 - 12% manufacturing – 62ml
 - 13% mining and oil and gas - 68ml
 - 6% Industrial processes – 31ml
 - 9% residential – 47ml
 - 36% transportation – 187ml
 - 5% agriculture – 26ml
 - 8% waste – 42ml
 - 1% other – 5ml
- 2013
 - 5% deforestation – 32ml
 - 7% manufacturing – 49ml
 - 19% mining and oil and gas – 122ml
 - 5% industrial processes – 32ml
 - 7% residential – 49ml
 - 39% transportation – 250ml
 - 4% agriculture – 26ml
 - 7.5% waste – 48ml
 - 6.5% other – 42ml

- 3) Then, pour out just under half of the 1990 emissions (40%). (With students learning fractions/practicing calculating percentages, you could have them calculate 40% or $\frac{2}{5}$ of 520ml before pouring the water out until reaching the target amount.
- 4) Compare the target that B.C. should be aiming for by 2030 with our current emissions.

Reflection Questions:

- Ask students if they think the target is realistic. How can we do it?

Make Polluters Pay: When people and businesses use fossil fuels they pay a small tax. By increasing this tax over time, more companies will try to use clean energy sources. More people will want to ride the bus, bike, or carpool rather than always driving in cars.



Teaching about this:

Background facts:

- B.C. implemented a carbon tax in 2008.
- The tax was frozen in 2013.
- The current B.C. government plans to keep the tax frozen until 2018.
- The tax is higher for fuels with higher emissions. Here's a [graph](#) that shows the different tax rates for gasoline, natural gas and coal.

Activity: Carbon tax scenario

- 1) Ask students what they would do if every time they wanted to drive somewhere in a regular car they had to pay a nickel (\$0.05). Would they do it?
- 2) Tell them it's \$0.05 per trip in a car. It doesn't matter if there is only one person or if every seat in the car is full. A bus has to pay a total for \$1.50 every trip, whether it's empty or full.
- 3) Ask: If our class was taking a field trip and could either take a bus or have parent volunteers drive us, what would be the cheapest option? What would be the most convenient? Have students work in small groups to solve the math problem.
- 4) Then have students solve another problem: The next year the carbon tax increases so that it costs \$0.10 per car ride. The cost per bus stays the same (\$1.50 per trip). What would your class do then?

Reflection questions:

- What are some ways to get around other than driving in a car?
- What are some pros and cons of these methods of transportation?
- Can you imagine life with less cars on the road? What would you like about this? What wouldn't you like?



sierraclub.bc.ca

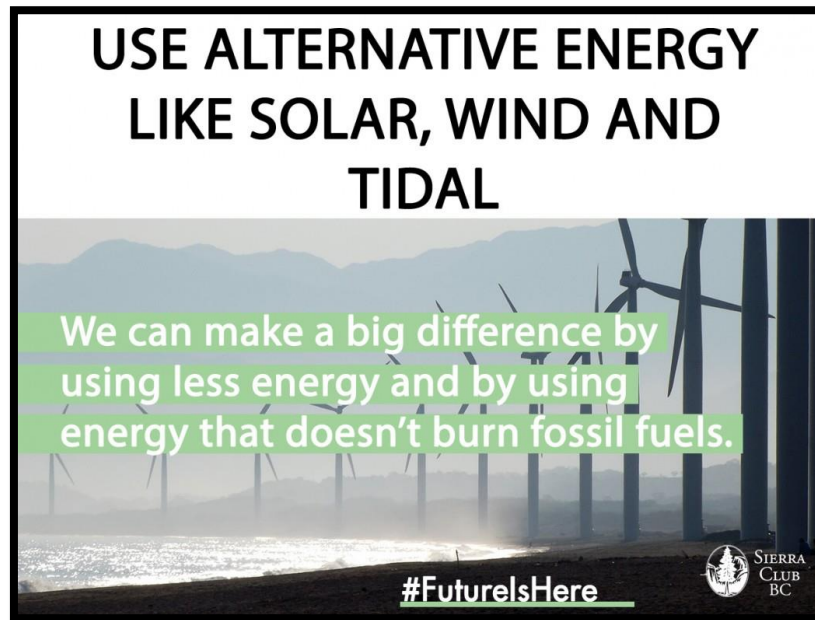


SIERRA
CLUB
BC



education@sierraclub.bc.ca

Use solar, wind and tidal energy now! We can make a big difference by reducing our energy use and by using energy that doesn't burn fossil fuels.



Teaching this:

Background info:

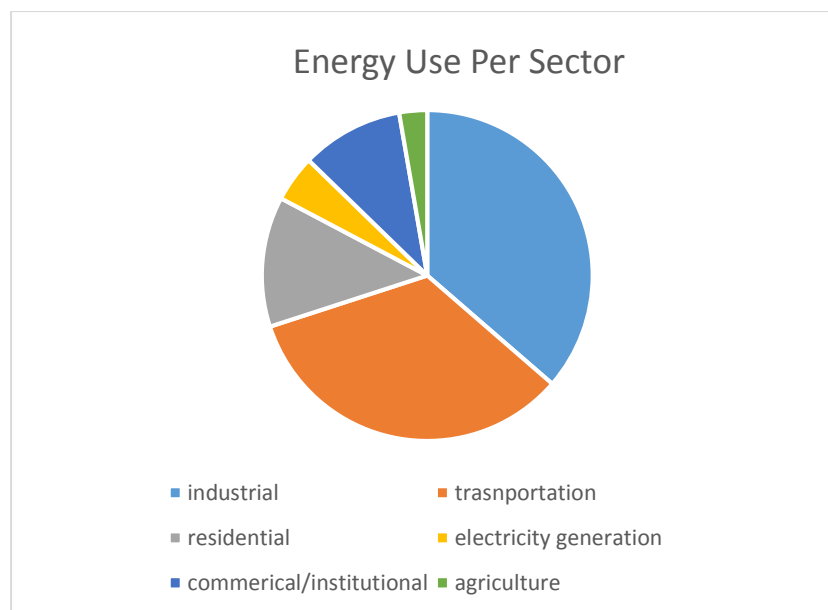
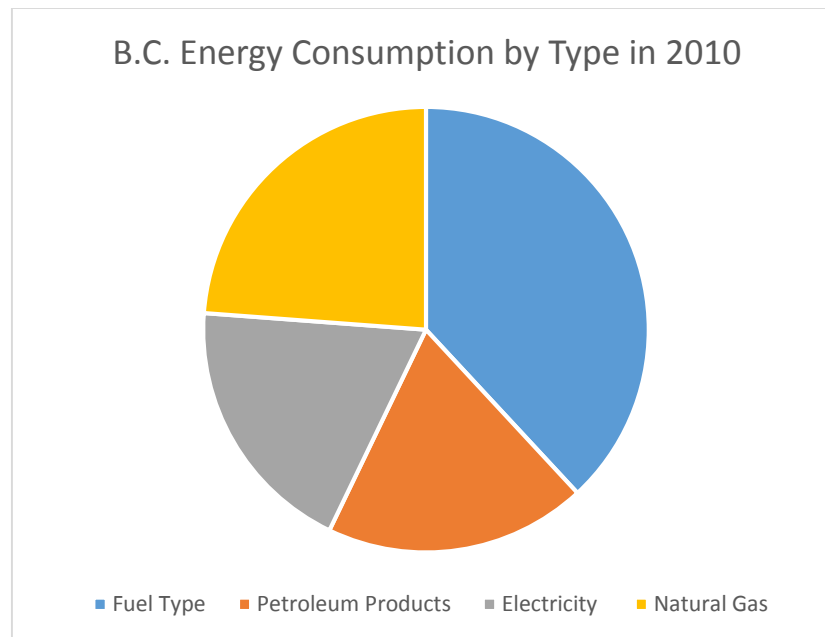
- Remind students that the first step in any environmental action is to REDUCE.
- Draw on students' prior knowledge: What are some ways they can/do reduce energy use? What about at your school and in your city/community?
- Some forms of energy are more polluting than others.
- Solar, wind, and tidal energy do not emit any greenhouse gases once they are up and working.
- Large hydroelectric dams/reservoirs and natural gas DO EMIT high levels of greenhouse gases (just not as high as coal, for example). For this reason, Sierra Club BC does not consider natural gas or large-scale hydroelectric projects to be clean energy.

Activity: [The Solutions Project](#)

The Solutions Project is an interactive, highly visual website that shows how every state in the USA and many countries could meet their current energy needs with 100% renewable energy.

- 1) Check out their infographics for Canada (<http://thesolutionsproject.org/> click on 50 states, then click on Canada). Remind students that these numbers are based on the amount of energy that we use today. If we were to reduce energy use FIRST the needs would be even less.
 - The Canada infographic is available in English and French, as well as other languages (<http://thesolutionsproject.org/resource/g7-100-vision-graphics/>)

- 2) In B.C., most of the energy we use is from hydroelectric generation, natural gas and refined petroleum products like gasoline, diesel, and jet fuel. B.C. produces more energy than it uses, including energy from other sources (like coal). B.C. sells these forms of energy to Alberta, the United States, and other places in the world. Look at the pie chart of the energy produced in B.C. (data from 2009).



Data is from the Pacific Institute for Climate solutions report [“Energy and GHG Emissions in British Columbia 1990 – 2010”](#)

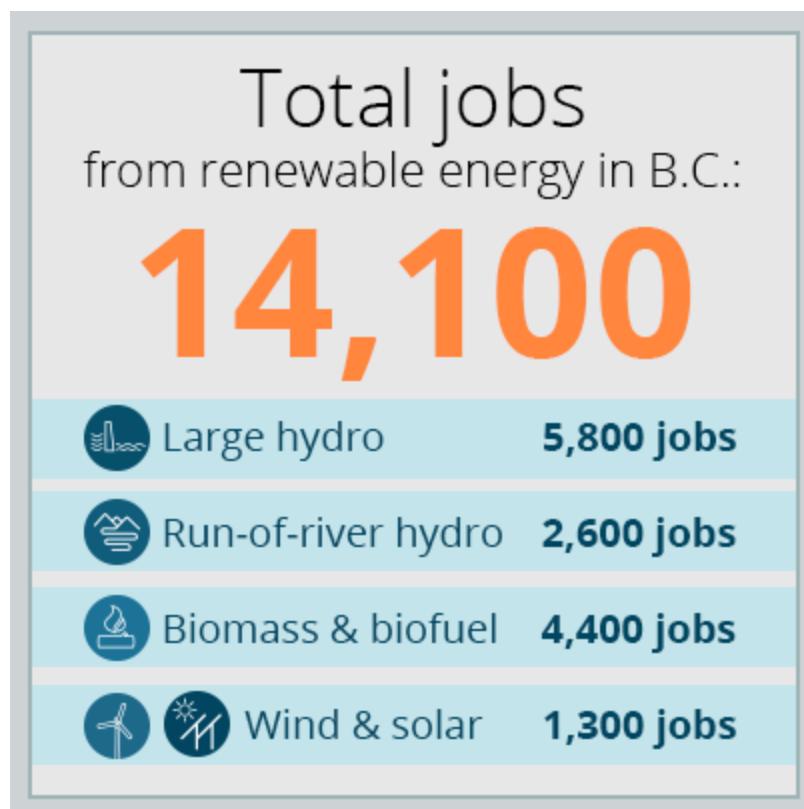
- 3) Have students work in small groups to brainstorm how they would make 100% renewable energy in B.C. What technologies do they think would work in B.C.? Do they know of any examples of renewable energy projects in the province? Suggest that students look at the infographics for Washington and Oregon, which have similar geography to B.C., for ideas.
- 4) Have students create posters of a B.C. infographic for the Solutions Project.
- 5) Compare between groups. Did students have the same ideas?

Reflection Questions:

- How can we reduce the amounts of energy that we use in B.C.?
- What are the best sources of renewable energy for B.C.? Which sources wouldn't work?
- Do you think these would be the same renewable energy sources as in Saskatchewan? What about Newfoundland?

Extension: We often hear in the media that fossil fuel industries provide lots of jobs. Because of this, there is a common misconception that renewable/alternative energies must not provide a lot of jobs. But they do! Show students the infographic from the Pembina Institute (below). Also, have your students explore the Pembina Institute's B.C. Jobs Map of jobs in renewable energy in B.C.:

<http://www.pembina.org/bcjobsmap/>



Reflection Questions:

- What regions of the province could benefit from more renewable energy jobs?
- Why do you think some parts of B.C. have more than others?
- What can we do so that people can have clean energy jobs anywhere in B.C.?



sierraclub.bc.ca



education@sierraclub.bc.ca

If it makes climate change worse, don't do it! B.C. needs a climate 'report card' for new energy projects like dams, mines, and pipelines. If they get a failing grade, they shouldn't happen.



Teaching this:

Background Info:

Almost every energy project, including building solar panels or putting up wind turbines, uses some fossil fuels (at least for now). But renewable energy projects like solar and wind also help us reduce our use of fossil fuels and lower greenhouse gas emissions over the long run. These are the types of projects that would get a passing grade on a "climate report card". Other projects, like building a new coal mine on Vancouver Island, would almost certainly fail. Why? Because all of the coal produced would be burned somewhere, emitting lots of greenhouse gases into the atmosphere.

Currently, all new energy projects have to pass an environmental impact assessment which does not consider greenhouse gas emissions. We think it should!

Activity: Design a Climate Report Card

Have your students create their own "environmental report card" for B.C. energy projects. The report cards should grade projects on different environmental impacts, including climate change.

- 1) What questions or criteria would they grade a project on? Brainstorm together or in small groups. Some prompts to help them think of questions are to use the categories wildlife; people; pollution; and climate change.

Sample questions:

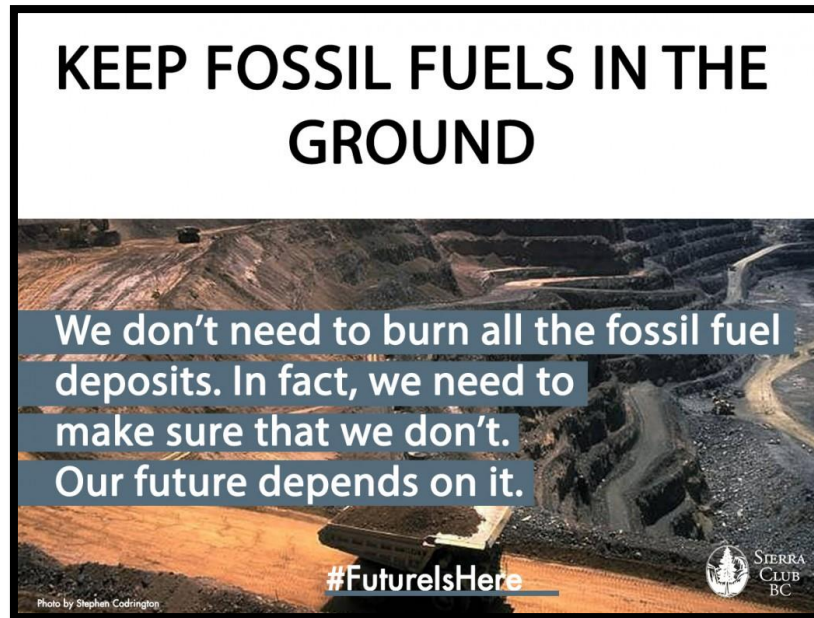
- Does the project harm wildlife?

- Does it emit other pollutants into the atmosphere or the water?
 - Does it emit greenhouse gases? How much?
- 2) Discuss what students think would make a project 'pass'. Try to come up with a class definition for *a great project*, *a good project*, *a project that still needs revisions*, and *a project that should not proceed*.
 - 3) Encourage students to use words and pictures on their report card.
 - 4) Hand out paper or have students use a program like Microsoft word to design their own report card for energy projects using words, pictures, and symbols.

Reflection Questions

- Do you think it is ok for people to alter the environment in order to produce energy?
- If solar and wind energy do not produce any greenhouse gas emissions, why doesn't every country use these technologies to produce energy?
- What could people do so that we could use renewable energy technologies like solar and wind everywhere?

Keep fossil fuels in the ground: We don't need to burn all of the fossil fuels out there. In fact, we need to make sure that we don't. Our future depends on it.



Teaching This

Background Info:

The activity below is all about finding out what prior knowledge your students have about fossil fuels and to learn more about them together as a class.

Activity: Getting to the bottom of fossil fuels.

This activity provides an opportunity for your class to get to the bottom (literally) of a pretty abstract concept: fossil fuels. As your students will learn, fossil fuels come from the ground and we can keep them there.

Use these three questions to structure a class discussion:

What is a fossil fuel?

Where do they come from?

Why should we "keep them in the ground"?

1) What is a fossil fuel?

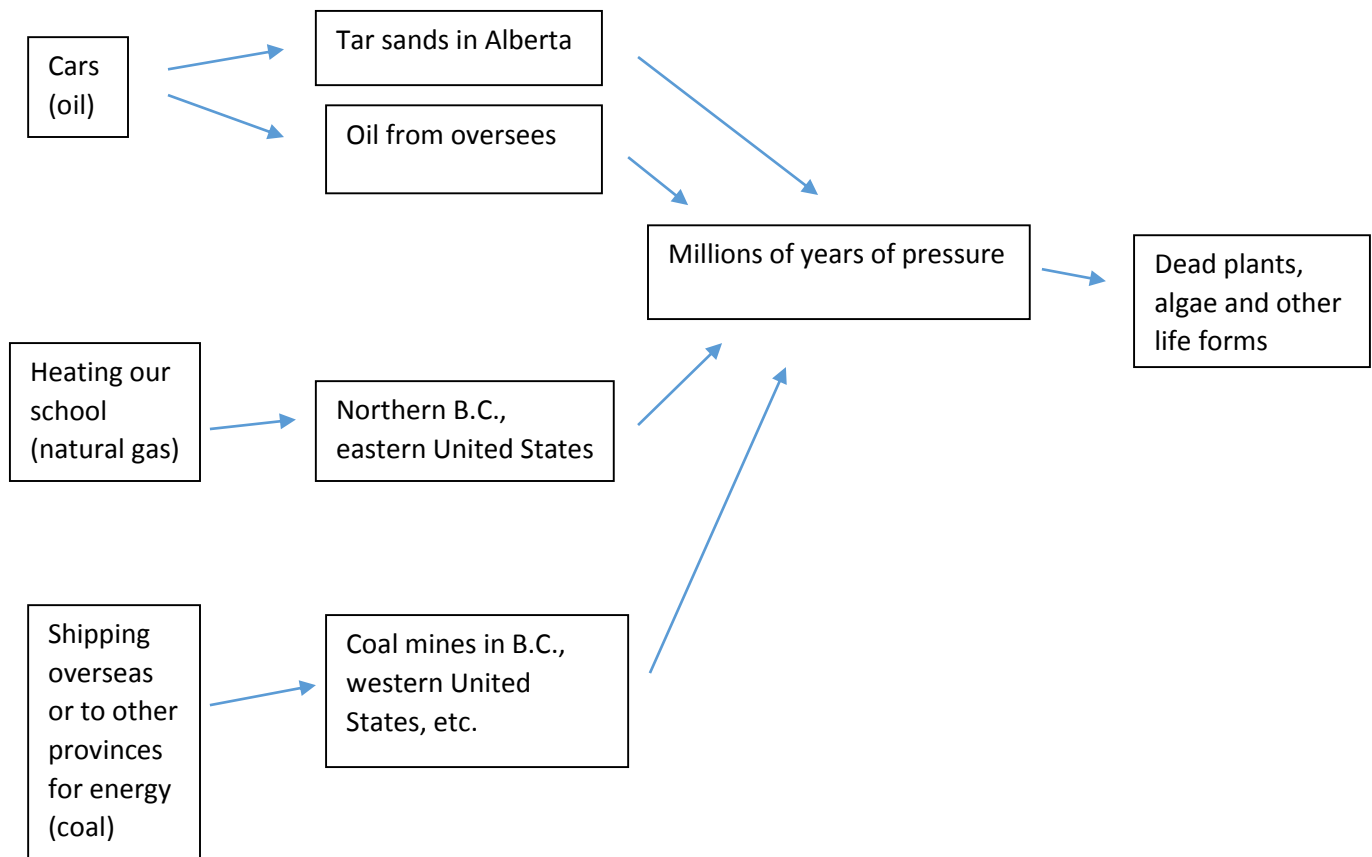
- A. Before doing anything else, break down the phrase "fossil fuel".
 - i. Divide the class in 2.

- ii. Tell each team that you are going to give them a secret word that they have to keep hidden from the other team. Give team 1 the word 'fossil.' Give team 2 the word 'fuel.'
 - iii. Have students on each team draw pictures to describe the word, or come up with ways to act it out.
 - iv. Have the opposite team try to guess the other team's word.
- B. Assess your students' prior knowledge. Can they name examples of fossil fuels (coal, oil, and natural gas)?
- C. Show your students images of the three fossil fuels and examples of how people use them (e.g. cars, heating, historical examples such as trains).

2) Where do fossil fuels come from? / How do fossil fuels formed?

Now that you have broken down the word fossil fuel, and know the names of the three types of fossil fuel, you can ask your students about where we find fossil fuels. There are a couple of layers to this question, and it can be best traced by making a large "map" or "commodity chain" together.

- A. First watch [this video](#) by Bill Nye (note: while parts of this video are out of date, there is still useful info for students about how fossil fuels are mined and on their place in our lives). Then watch [this video](#) from Earth: The Operator's Manual.
- B. Get a large piece of paper or a few pieces of Bristol board. Or use your white board or smart board. Together you are going to record what you learned by working backwards from the ways that people use fossil fuels, to where (geographically) those fossil fuels come from, to how the fossil fuels were formed over millions of years. Try to use B.C. and Canadian examples as much as possible.
- C. Figure out which questions you still don't know the answer to. Flag them as things to research in your next computer class.
- D. At the end your chain/map should look something like this (but hopefully with interesting pictures too):



3) Why should we keep them in the ground?

Remind your students that we CAN keep fossil fuels in the ground. We can use less energy and we can use alternative energy sources. But they may still be wondering, “Why?” They have probably heard of climate change, global warming and the greenhouse effect. However, they may not understand how fossil fuels are connected to these phenomena.

A. There are a number of fun, and effective demonstrations and games that you can use to help your students understand the greenhouse gas effect. One example is the [Greenhouse Effect Game](#) from the Habitat Conservation Trust Fund.

- o We also like the [Greenhouse Gatekeepers Game](#). Simplify the rules by instructing energy waves to run from one side of the field to the other at your whistle. Let the greenhouse gases move too, but within a small strip of the field representing the “atmosphere” and marked by pylons. This will make the game simpler and more fun.

B. There is also a moral dimension to this question. Here is a [good video](#) that introduces the topic of climate injustice – that some people in the world, especially the poorest and most vulnerable, are and will continue to be the most affected by climate change impacts. It also introduces climate justice.

Reflection Questions:

- o How would you explain fossil fuels to someone else? What are the top three things that you would tell them?

Nature needs more: Wildlife and ecosystems need enough space, protection from pollution, and protection from other human threats in order to adapt and survive.



Teaching this

Background Info

This is an excerpt from a [recent article](#) at carbonbrief.org. Later, in the activity, you can read this blurb to your students to help them understand climate change as one threat to wildlife and other species.

“The rate at which plants and animals are becoming extinct is now [a thousand times higher](#) than before humans inhabited the Earth.

Habitat loss is the principal cause of extinctions, as forests are cleared and urban areas expand. But a new study, published in [Science](#), suggests that climate change could soon become a key threat to species around the world.

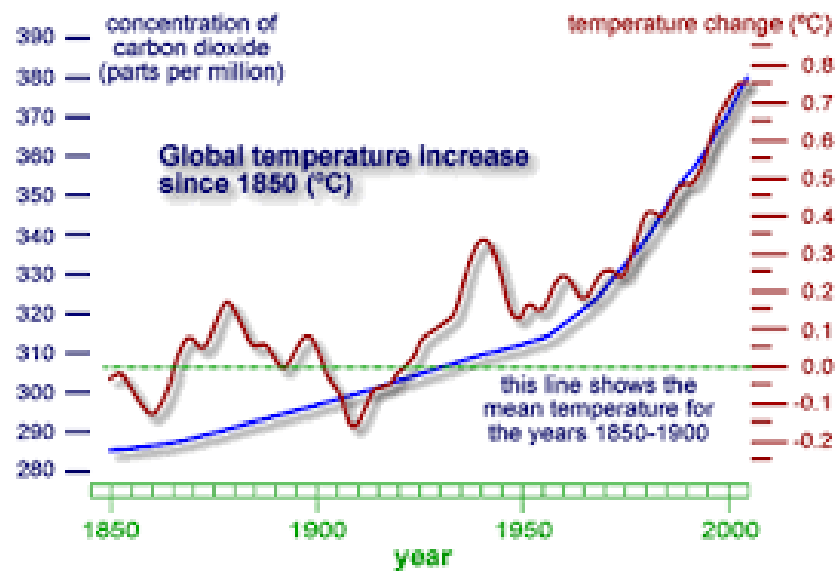
A warmer world could have many [different impacts](#) on plants and animals, not least by pushing temperatures beyond species’ physical tolerance. Shifting seasons can affect breeding patterns, and hot days may mean animals have less energy to search for food.

Changes to rainfall patterns may affect availability of water and freshwater habitats. These changes could conspire to influence how much food a species can access, and what predators and diseases it is exposed to.

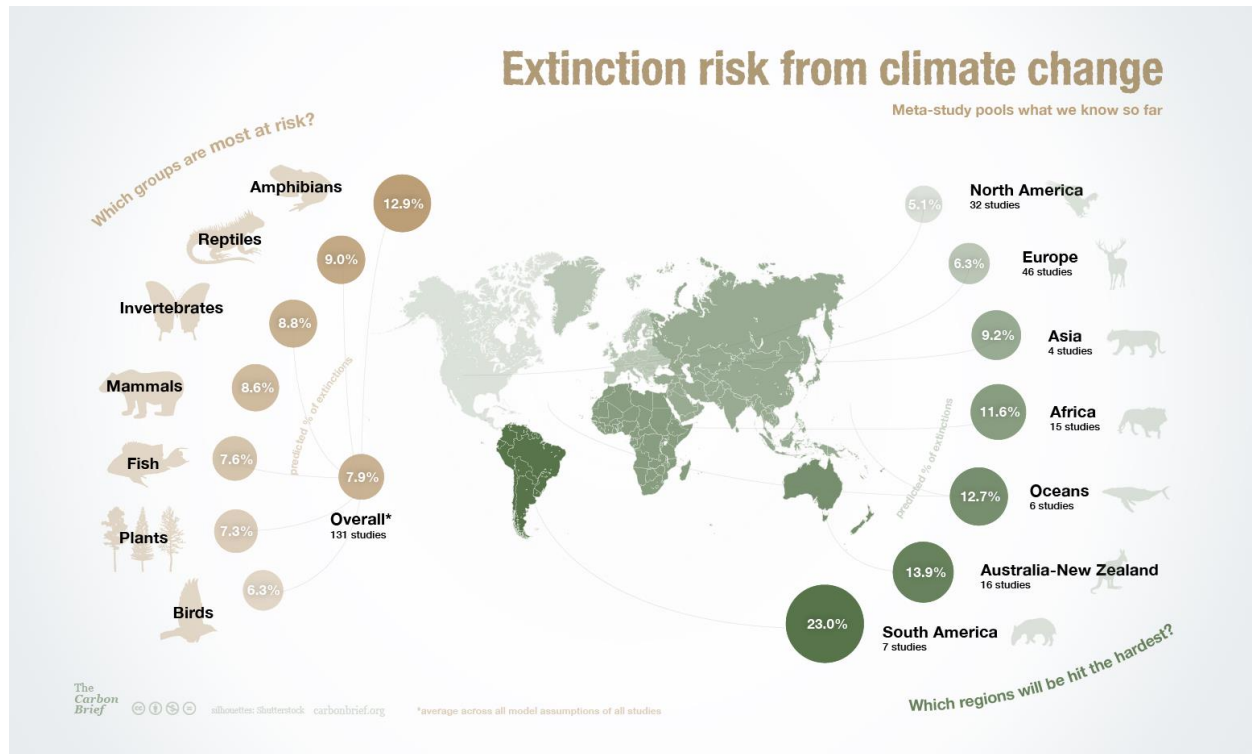
The combination of habitat loss and climate change is likely to intensify their individual impacts on different species...”

Activity:

1. Give students one minute to write down all of the examples of wildlife that they can think of.
2. Then ask students to take one more minute and make sure that they have remembered to include wildlife that lives in aquatic ecosystems, like rivers, lakes, and oceans.
3. Ask students to share some of their examples.
4. Then have students spend another minute writing down all of the threats to wildlife and ecosystems that they can think of.
5. Again have students share.
6. Then read the excerpt from carbonbrief.org copied above (Background info).
7. Show students the graphs from the article: 1) graph showing increase in CO₂ and temperature over time, to give a visual representation of climate change; 2) graph showing predicted extinctions related to climate change.



1. From Climate Choices-Children's Voices, a UK based organization for teachers and students



2 From Carbon Brief Article: Predicted extinction rates from climate change by region and group. Credit: Rosamund Pearce, Carbon Brief, based on data from Urban (2015).

8. Ask students: What do these graphs show us?
9. OPTIONAL: Have students read [this article](#). The articles talk about the links between biodiversity loss and climate change and would be helpful for discussions for grade 6-8.
10. Brainstorm ways that people can help wildlife to have enough space, and decrease and clean up pollution in the environment – and in doing so, help them adapt to climate change.
11. Brainstorm some ways to help reduce climate change as one way to help protect biodiversity.
12. Have each student write a pledge of how they will help wildlife or a message of why defending ecosystems and wildlife is important to them. Create a bulletin board with pictures of students holding up their pledges.

Reflection Questions:

- Why do you think amphibians (like frogs and newts) and reptiles are more at risk of extinction from climate change than other wildlife and plants?
- Why do you think that species in South America and New Zealand are more at risk than species in North America?

Respect Aboriginal Rights and Title: Any policies affecting lands, waters, and resources in Canada, need to be made in full partnership with First Nations, Inuit, and Metis nations.



Teaching this

Background Info:

The Zinn Education Project developed an empathy-based role-playing unit for grade 9 students focused on Indigenous communities and the impacts of climate change.

The reading level of the unit is for high school students, but could be adapted for grades 6-8.

Activity: Zinn Project “Don’t Take Our Voices Away”

1. Find the teacher backgrounder, students handouts, unit plan and all other resources here:
<http://zinnedproject.wpengine.netdna-cdn.com/wp-content/uploads/2011/08/Dont-Take-Our-Voices-Away.pdf>
2. The unit does not specifically address Indigenous peoples in Canada. To include these perspectives, you might invite a local Elder or knowledge keeper to your class or school to talk to your students about climate change.

You can also/alternatively lead a discussion with your students about the statement made by Musqueam Elder Larry Grant at a conference on Indigenous Peoples and Climate Change held at UBC in 2008:

“Larry Grant, an Elder from the Musqueam Nation in Vancouver, remembers when ponds would completely freeze over in the winter and seasonal salmon and eulachon runs were

in abundance. From the podium, he spoke about global warming and the transformative effects it has had on the environment for coastal First Nation communities. From annual pine beetle infestations killing British Columbia forests to fierce and unyielding winter winds causing havoc on parks and affecting drinking water supplies, Grant said there has been a shift between natural ecological occurrences and the human-induced environmental changes we're experiencing. These transitions affect traditional First Nation hunting, gathering and harvesting methods and Grant says industry and humanity are to blame.

"Modern western industrial society, not knowing-or possibly not really caring-has not maintained balance between keystone species and predator species, creating an imbalance in how Mother Earth is interdependent," he said.

The failure of lucrative salmon runs in the Fraser river has not only prompted a wake-up call, causing the industry to recognize the effects of climate change, but in the past, it has also caused the First Nation fishery to become something of a political and economic scapegoat, Grant said. Talking about how climate change is resulting in a rise in ocean temperature and the negative effects that warmer water has on salmon spawning cycles, Grant said the resulting shortages in seasonal salmon stock has often led to misplaced accusations of poaching by Aboriginal people, "thus creating a misconception of immorality in Aboriginal peoples of Canada and perpetrating a negative stereotype of Aboriginals," he said." ([Windspeaker Article](#))

Reflection Questions:

After the unit, tell your students that as of December 7, 2015, "the inclusion of Indigenous rights in the climate agreement was "annexed" from the operative text —the part that has legal force —by the European Union and the United States over climate liability concerns." In other words, the EU and the United States have argued that the climate agreement does not have to legally respect Indigenous Rights.

- How does this make them feel?

Show them [images](#) of the Indigenous Peoples' kayak flotilla in Paris, a demonstration advocating that Indigenous Rights must be included in the agreement.

- How do these photos make them feel?
- Would you add any more recommendations to lists you compiled in the unit?

Create a Forest Action Plan: Healthy forests provide food and shelter for tons of living things, they clean our water, and they help reduce climate change. We need to better defend B.C. forests.



Teaching This

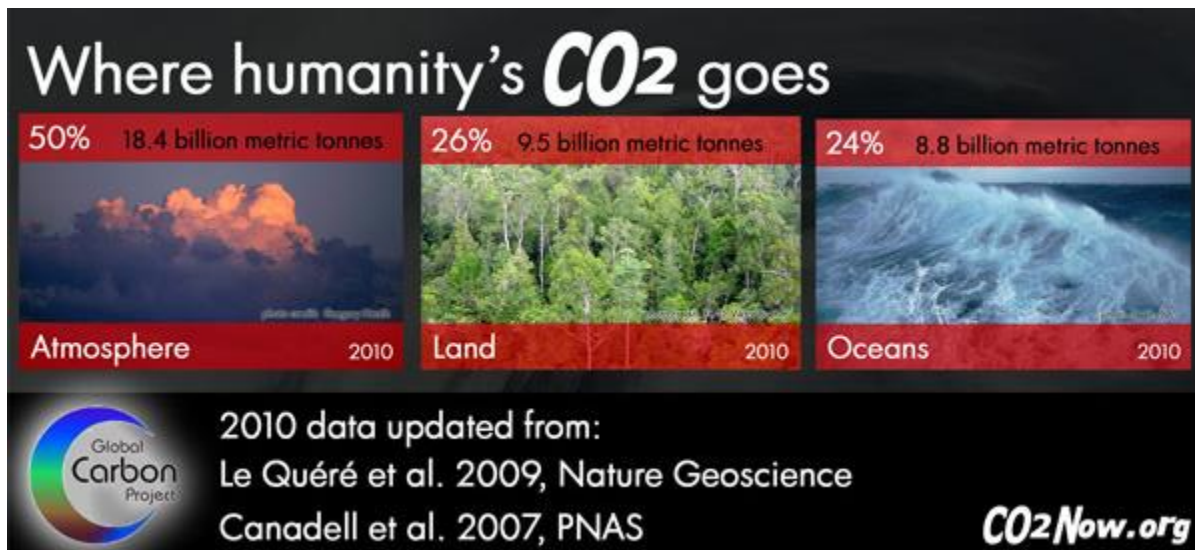
Background Info:

Begin by explaining to students that defending our forests doesn't mean not cutting any trees down, ever. People use trees, but we can use them in smarter ways. We can use less overall (less consumption, reusing and recycling things) and we can create less waste (using all the parts of a tree). We can also harvest (cut down) trees in ways that are less harmful for ecosystems.

Activity: Carbon Sinks

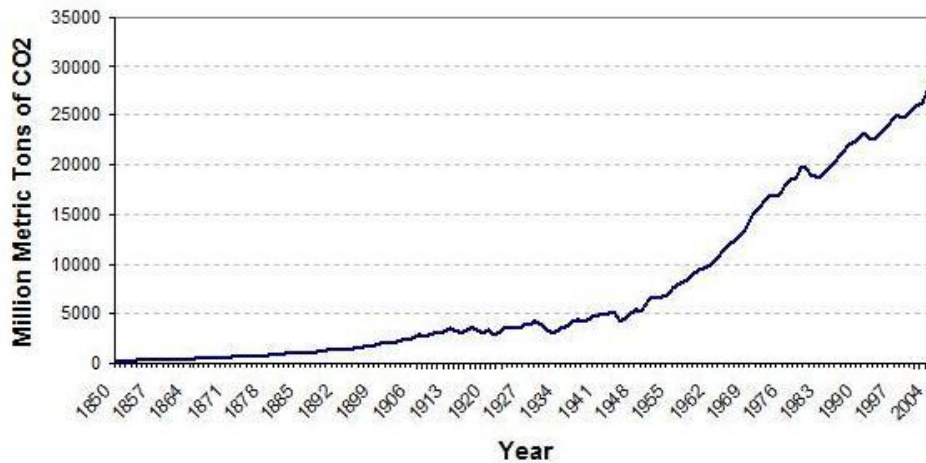
In this activity, your students will learn about how forests act as "carbon sinks." They absorb carbon dioxide from the air, and store it. Because of this, keeping forests healthy is an important way that we can help minimize climate change. It's another way to reduce carbon emissions. Riding a bike reduces the emissions that cars put out into the air. Keeping forests whole and healthy reduces emissions by absorbing excess carbon dioxide from the atmosphere.

1. Show students the image below. Go over what it is showing.



2. Now you will use kinesthetic learning to try to deepen student understanding of the concept:
 - A. Before class, prepare 4 big ziploc bags of popcorn. The first bag should have 12 pieces of popcorn; the second should have 30; the third should have 48; and the fourth should have 96 pieces. The bags represent 1850; 1925; 2000; 2075. You will also need a bucket or bag for each team to use as their carbon sink.
 - B. Divide students into 2 groups (Forests and Oceans) and have them stand on opposite sides of the classroom or a small field
 - C. Say it's just before the industrial revolution. There is always a base level of carbon dioxide in the atmosphere (6 pieces of popcorn). Trees and oceans absorb the rest of the CO₂ produced by animals that breathe it out. Have three students from forest and trees come and pick up a piece of popcorn and return it to their "carbon sink."
 - D. Now it is 1925. The industrial revolution has happened and human industries are adding extra carbon dioxide to the atmosphere. Empty the second bag of popcorn next to the 6 baseline pieces for a total of 36 pieces. If the baseline is 6 pieces of popcorn, and oceans and forest can absorb roughly the same amount of excess CO₂, can your class absorb all of the excess? Have every student pick up a piece of popcorn and add it to their carbon sink. Count the excess CO₂ and subtract the baseline of 6. (With a class of 24 students, you should have about 6 extra pieces, or 2 times the baseline).
 - E. Now it's 2000 and human emissions of CO₂ have skyrocketed. Empty the bag of 48 pieces next to the baseline. Explain that as in 1925, trees and the ocean can absorb some of this excess carbon dioxide, but not all of it. Again invite every student to pick up a piece of popcorn and add it to their carbon sink. Then count the excess CO₂ and subtract the baseline of 6. (With a class of 24 students, you should have about 24 extra pieces, or about 4 times the baseline.)
 - F. Repeat with the bag for 2075. There should be a lot of excess!
 - G. Graph your info, it should roughly mirror graphs of CO₂ emissions (see graph below).
 - H. Have students count the pieces of popcorn in their carbon sinks. Ask them if we did not have forests to absorb carbon, how would our graph look different?

Historical Global CO₂ Emissions* (1850-2004)



*from Fuel Burning, Cement Manufacture, and Gas Flaring

Source: Marland et. al (2007) Global, Regional, and National CO₂ Emissions. In Trends: A Compendium of Data on Global Change. CDIAC U.S.A.

Reflection Questions:

- What if we cut down half of the forests? What would you predict for the future?
- Do you think planting and stewarding more forests can make a difference?
- What else do people need to do to reduce our CO₂ emissions?



sierraclub.bc.ca



SIERRA
CLUB
BC



education@sierraclub.bc.ca

Reconnect with nature: Spend time outside! Learn about your local environment and all the amazing things that are part of it.



Teaching this

Background info:

Groups like the [Child and Nature Network](#) have compiled extensive research on why spending time outdoors is good for children and good for our environment.

Activity:

This one is simple. Spend a morning or afternoon outside with your students.

1. Allow students some unstructured time just to hang out and explore in a natural space, like a forest or a meadow.
2. Scavenger hunts, and “sit spot” journaling are great and simple activities that you can do with your students.
3. Your class could also encourage your entire school to take part in a “nature-challenge.” Students log hours they spend outside, and the class with the most hours could receive a fun, and hopefully outdoors, reward.

Reflection questions:

- Do you enjoy spending time in nature?
- What do you like about nature? Is there anything you don't like?
- Who do you enjoy spending time outdoors with? Why?

We need to adapt: B.C. needs a plan for adapting to climate change impacts already happening.



Teaching This

Background Info:

We need to reduce future greenhouse gas emissions. And we also need to recognize that climate change is happening. Right now. Already!

Activity: People can adapt too (Alternatively, try the [The Future of Delta](#) video game with your class).

1. Begin by introducing the background info to students.
2. Look at stories in B.C. and national newspapers about climate change impacts in B.C., Canada and North America. Examples news stories include stories on the [2015 forest fires](#); [mountain pine beetle](#) (this is a long article, you could pull up key paragraphs for your students); [no snow on ski hills](#); [effects on salmon](#). A nice summary of impacts in the prairies is [here](#).
 - a) After considering the articles, suggest to students that in addition to trying to minimize climate change we need to adapt to the impacts already happening. Ask:
 - How can we do that?
 - How can communities better prepare for the impacts of climate change, like more droughts, more extreme storms, and forest fires?
 - How can we help wildlife adapt?
 - a. Identify a climate change impact in your community (e.g. drought; heavy winter storms; forest fires). Have students reflect on their experiences and what they have observed happening to the natural environment as a result.
 - b. Ask question about what they remember, how they felt, and what they and their families did to react to it. (E.g. If you are discussing a drought, did they have to use less water and

- not water the lawn?; If you're discussing a forest fire, did they have to have a preparation plan in case a fire got too close?)
- c. Brainstorm a list of questions that a journalist would want to ask members of the community about the climate change impact.
 - d. Then divide students into pairs in which one student will play the role of a journalist and the other will play the interviewee. Have the groups spread out and conduct the interviews, and then switch roles.
3. As a class, share the different ways that people adapted/are adapting to the climate impact. Can you collectively agree on 1-3 "best practices" to adapt to the situation that you might recommend to others?
 4. OPTIONAL: Have students write short newspaper articles telling their partner's story and including recommendations on how people can best adapt.

Reflection Questions:

- Should people focus on adapting to climate change or trying to stop its impacts?
- Can we do both?
- Do you imagine that B.C.'s environment and climate will be different in 20 years than it is now? What about in 50 years? How will peoples' lives be different?

Like this toolkit?

Some final ideas for creating a better climate future for B.C.



Please [donate](#) today in support of our work.



Visit our [website](#) to find many more resources available for free download.



[Learn more](#) about Sierra Club BC's vision for a healthier environment and climate.