



Food is an excellent starting point for thinking about social justice and climate change. We all eat, and many of us are aware of trends in food production and distribution, such as organic produce and farmers' markets. Climate change challenges how we access food, in particular the food we import – currently about half of our food in BC. Food production can also be very intensive in greenhouse gas emissions. Issues of food democracy, such as working conditions for migrant farm workers and hunger, must also be included when rethinking our food supplies.

This module is based on the Climate Justice Project report, *Every Bite Counts: Climate Justice and BC's Food System* www.policyalternatives.ca/everybitecounts

OBJECTIVES

- Students will connect their lived experience to the concept of a food system.
- Students will understand the concept of food democracy and its connection to poverty and inequality in BC.
- Students will understand that food justice includes farmers and farmworkers (especially temporary migrant workers) who do not always receive fair incomes.
- Student will explore how they can apply the principles of food democracy to their school.

COMPONENTS

1. Introduction to food systems
2. Opinion-o-metre: Food thoughts, equity and access
3. Ideas for action: Food democracy in BC schools

CURRICULUM CONNECTIONS

Science and Technology 11
Sustainable Resources 12
Social Studies 8, 9, 10, 11
Civic Studies 11
Comparative Civilizations 12
Geography 12
Social Justice 12,
English Language Arts 8, 9, 10, 11, 12
Communications 11, 12
Applied Skills 11
Business Education 8, 9, 10
Economics 12
Home Economics:
Family Studies 10, 11, 12
Home Economics:
Foods and Nutrition 8, 9, 10, 11, 12
Planning 10

Visit <http://teachclimatejustice.ca/the-lessons/PLOs> to download a comprehensive list of BC Ministry of Education prescribed learning outcomes (PLOs) that may be addressed with this resource package.

TOTAL SUGGESTED TIME

2 hours

RESOURCES REQUIRED

- Digital projector and computer
- Whiteboard/chalkboard and markers/chalk
- Large pieces of paper and markers
- PowerPoint *Reimagining our Food System* [Download at www.teachclimatejustice.ca]



Part 1 – Introduction to food systems



Read aloud: Today’s topic is “reimagining our food system.” A food system is comprised of all elements of food production and distribution from farm to fork, including farmers, other workers and consumers.



Activity: Mind mapping the concept of “food systems”

- **Question:** Based on your own experience with food, what words come to mind when you hear the phrase “food system”?
- As a class, create a mind map on the board, making connections as they arise. This could include: organic farming, farmers’ markets, community-shared agriculture, junk food, compost, 100 mile diet, food banks, soup kitchens, cafeterias, community gardens, etc.



Part 2 – Opinion-o-metre: Food thoughts, equity and access



Activity: Opinion-o-metre

An imaginary curved line is drawn across the floor; one end is designated as ‘strongly agree’ and the other as ‘strongly disagree’. Students listen to statements about food issues and place themselves along the line according to their position or reaction to each statement. For each statement, ask a variety of students across the spectrum of agreement/ disagreement to share their thoughts. Make sure to hear from a range of opinions/voices. Allow 4-6 minutes per statement (or more if necessary). Over the course of the discussion, if their opinion on a statement changes, students are free to change their location along the continuum. You can share the information that follows each statement after students have voiced their thoughts. Feel free to select or omit statements as appropriate.

Opinion-o-metre statements:

Test statement: **“Dogs are much better pets than cats.”**

“People’s access to healthy food in BC is something we should all be concerned about.”

- Food bank use in Canada increased 2.1% in 2011, and was 31% higher than 2008.
- The use of meal programs (soup kitchens, shelters, school initiatives) increased 23% percent between 2011 and 2012.
- People need to earn a living wage so they can purchase the food they need.

“Food production doesn’t contribute that much greenhouse gas in the big scheme of things.”

- A report from Greenpeace International estimated GHGs from agriculture at between 17% and 32% of global emissions, when land use changes are included.

BC AGRICULTURAL GHG EMISSIONS, 2007

| BC production | GHG emissions (kt-CO ₂ e) | Percent |
|--|--------------------------------------|---------------|
| Livestock emissions | 1,517 | 37.1% |
| Fertilizers/land use | 826 | 20.2% |
| Energy use on farms | 855 | 20.9% |
| Production and transport of agricultural chemicals | 824 | 20.1% |
| Net imports of animal feed | 69 | 1.7% |
| Total estimate | 4,091 | 100.0% |

Source: Ministry of Environment, BC Greenhouse Gas Inventory; Authors’ calculations based on Statistics Canada data on energy use, agricultural chemicals, and animal feed.

“My family would be willing to pay a little more for food if it meant we were supporting local farmers and businesses.”

- Supporting local food producers keeps money in the local economy.
- BC has lots of small farms – about 20,000 in all.
- Buying locally reduces the need to transport food long distances.

“Organic produce is better for both you and the environment, even if it costs more.”

- The high cost of buying organic food is challenging for low-income families.
- Building stronger networks for small organic farmers to distribute their produce would lower costs (e.g. selling in bulk to schools).
- Because organic foods do not use fertilizers made from fossil fuels, they have a lower GHG footprint.

“BC should produce more of the food British Columbians eat.”

- BC imports about half of its food, mainly from California, a region already experiencing drought due to climate change. California may not be able to produce as much food for export to BC in the future.
- Climate change disruptions in the future may affect our access to food, in terms of supply and price. Risk factors include things like droughts, floods, insect infestations, excessive heat or extreme weather events like hail storms – all things farmers have always contended with that may occur more frequently due to global warming.
- BC has an extensive Agricultural Land Reserve – this is land set aside for farming, although not all of it is under cultivation.
- On the other hand, relying 100% on BC food production could increase the province’s vulnerability in the case of natural disasters on the home front (e.g. a big hail storm in the Fraser Valley at harvest time).

“BC farmers and farm workers make decent incomes.”

- In supply-managed parts of the food system, where there are restrictions on the amount of food produced (dairy, eggs and poultry), consumers pay higher prices, but this means farmers can make a good living. In other areas of the food system this is not the case, and farm incomes are generally quite low.
- BC has an increasing number of temporary migrant farm workers – about 5,000 in 2013. These workers are often paid poorly, are forced to put up with difficult working and living conditions and don’t have the same employment standards as other industries, leaving them vulnerable to exploitation.



Part 3 – Ideas for action: Food democracy in BC schools



Quick pair-share question:

For whom is access to good quality food particularly difficult? Why?

- Low-income earners and others who experience poverty. Some groups are disproportionately affected by poverty, such as single-parent households, recent immigrants and refugees, First Nations peoples, people with disabilities and elderly people. BC has the highest child poverty rate in Canada.
 - Important note: Most people who live in poverty in BC have jobs, but their jobs don't pay enough to cover the cost of living.
- Good quality, healthy food (especially organic food) is often more expensive than other options. People with higher incomes don't experience the same financial pressure as people living in poverty, and their food costs are a smaller part of their overall income.



Read aloud: "Food democracy" has emerged as a concept in response to unequal access to healthy food, as well as to the contrast between people working in the food industry and the people who benefit from it.

The CCPA report *Every Bite Counts* defines food democracy as "ensur[ing] that all have access to affordable, decent, health-enhancing food." In this way, food democracy:

- Challenges the corporate structure and control of food, and advocates for grassroots and community control of food systems.
- Stresses "decency and social justice in the food system's wages, and working conditions."
- Recognizes environmental sustainability as an aspect of food democracy.



Activity: Mapping your school's food system

Students sit in small groups with a large piece of paper and some markers.

First, ask each group to describe and draw a representation of their school's food system – all the points where students come into contact with food at school (refer back to the mind map in part 1 if necessary). This could include cafeterias, hot lunch programs, school garden, composting, food classes, vending machines, student fundraisers, etc.

Next, ask students to describe how these food contact points within the school could be reimaged with food democracy in mind.

Ask each group to report back to the class about their discussions. This might include: expanding or starting school gardens to feed into the cafeteria and food lessons, including composting of organic materials; buying food sold at the school from local farms and asking the farmers to come speak to students about it; etc. Keep track of students' ideas for enhancing food democracy within the school's food system – you may want to return to them at the end of the unit.





ACTIVITIES FOR FURTHER EXPLORATION

1. Take a field trip to a local farm or farmers' market.
2. Have a local farmer come in and speak to the class.
3. Do a project on how to make balcony/backyard gardens.
4. Create or expand a school or community garden.
5. Create a poster to inform the community about food democracy.

ADDITIONAL RESOURCES

- **Every Bite Counts: Climate Justice and BC's Food System**
www.policyalternatives.ca/everybitecounts
- **Cultivating Farmworker Rights: Ending the Exploitation of Immigrant and Migrant Farmworkers in BC**
www.policyalternatives.ca/publications/reports/cultivating-farmworker-rights
- **Cool Farming: Climate impacts of agriculture and mitigation potential**
www.greenpeace.org/international/Global/international/planet-2/report/2008/1/cool-farming-full-report.pdf

LOCAL FOOD

BC/Canada

- **Farm Folk City Folk**
www.farmfolkcityfolk.ca
- **BC Association of Farmers' Markets**
www.bcfarmersmarket.org/
- **Earthsav Canada**
<http://earthsavcanada.wildapricot.org/>
- **Get Local BC**
www.getlocalbc.org/
- **Land Food People Foundation**
<http://landfoodpeople.ca/>

Interior/Northern BC

- **UNBC Farmers' Market**
www.unbc.ca/university-farmers-market

Vancouver Island

- **Island Farm Fresh**
www.islandfarmfresh.com

Lower Mainland

- **Burnaby Food First**
<http://burnabyfoodfirst.blogspot.ca/>
- **Fresh Roots Urban Food Society**
<http://freshrootsurbancsa.wordpress.com/>
- **Sustainable SFU**
<http://sustainablesfu.org/>
- **Vancouver Community Food Assets Data**
<http://vancouver.ca/your-government/community-food-assets-datasets.aspx>
- **Vancouver Farmers Markets**
www.eatlocal.org/
- **Vancouver Food Pedalers Cooperative**
www.foodpedalers.ca/

SCHOOL AND COMMUNITY GARDENS

- **Think and Eat Green at School**
<http://thinkeatgreen.ca/>
- **Environmental Youth Alliance**
www.eya.ca/
- **Intergenerational Landed Learning on the Farm for the Environment (UBC)**
<http://m2.edcp.educ.ubc.ca/landedlearning/>



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The opinions and recommendations made in these lesson plans and the linked reports and resources, and any errors, are those of the authors, and do not necessarily reflect the views of the CCPA, BCTF or funders of the Climate Justice Project.

ABOUT THE PROJECT

Climate Justice in BC: Lessons for Transformation was designed to provide teachers with classroom-ready materials to engage their students with how climate action intersects with social justice (“climate justice”). The curriculum features eight modules designed for grade 8-12 students to explore climate justice within the context of BC’s communities, history, economy and ecology. These lessons tie into subject matter and prescribed learning outcomes (PLOs) already in BC’s curriculum (complete list at teachclimatejustice.ca/the-lessons/PLOs), while providing a framework to unpack modern social and environmental issues.

The topics are based on reports from the Canadian Centre for Policy Alternatives’ Climate Justice Project – a research project that looks at the two great inconvenient truths of our time: climate change and rising inequality. (Climate Justice reports, shorter pieces and videos available at www.climatejustice.ca.)

Visit teachclimatejustice.ca for downloadable and online components of this curriculum, including PowerPoint files, links to videos and resources, and individual lesson PDFs.

Teachers are encouraged to adapt these lessons to their particular classroom needs, or pull out specific activities as appropriate. Times allocated for each module are approximate and will vary greatly depending on the grade and composition of the class. While these lessons were designed for secondary students, most modules and activities are easily adaptable for upper intermediate students. Feedback is welcome and will help us refine these modules for subsequent editions.

MODULE SUMMARIES

Module 1: Introduction to Climate Justice
Causes and effects of climate change through a fairness and equity lens.

Module 2: Reimagining our Food System
Climate change and our food systems, how climate change may affect food production in BC and elsewhere, and social justice issues, such as vulnerability to hunger and migrant farm labour.

Module 3: Transportation Transformation
How community design encourages or discourages car use, and what we can do to better facilitate walking, biking and public transit options, create more complete communities and improve quality of life.

Module 4: Rethinking Waste
Moves beyond recycling and composting and looks at our culture of consumption and how it produces waste, both solid waste and airborne emissions like greenhouse gases.

Module 5: Fracking Town Hall
Uses a town hall simulation to explore the challenges of fossil fuel extraction and the bigger picture context of the push for a BC-based liquefied natural gas (LNG) industry.

Module 6: Green Industrial Revolution
Uses the mini-documentary *Town At The End of the Road*, to consider how resource sectors can be re-imagined as part of a green economy.

Module 7: Imagining the Future We Want
Uses a storytelling exercise and themes of intergenerational justice to discuss the challenges we face today and imagine how we can move towards a better future.

Module 8: Challenges to Change
Explores the essential elements of successful social change movements.

GLOSSARY

2°C – The amount of global warming above pre-industrial levels (200 years ago), which could lead to catastrophic outcomes for human populations (and countless other animal and plant species). The Earth has already warmed by 0.8°C above pre-industrial levels.

Carbon dioxide (CO₂) – A heat-trapping molecule, and the principal greenhouse gas of concern to climate scientists. A growing concentration of CO₂ from burning fossil fuels is warming the Earth.

Carbon tax – A tax applied to the combustion of fossil fuels. BC currently has a carbon tax that amounts to about 7 cents per litre at the gas pump.

Climate change – The altering of climate patterns (e.g. more precipitation, more intense storms, floods or droughts) on Earth caused by the burning of fossil fuels.

Climate justice – A term for viewing climate change as an ethical issue and considering how its causes and effects relate to concepts of justice, particularly social justice and environmental justice. This can mean examining issues such as equality, human rights, collective rights and historical responsibility in relation to climate change.

Fossil fuels – Fossil fuels are the underground remains of plants and animals that lived millions of years ago, which can be processed and combusted for energy use. Examples include oil, bitumen, coal and natural gas.

Global carbon budget – An estimated maximum amount of carbon dioxide and other greenhouse gases we can emit into the atmosphere before passing the 2°C critical threshold of warming.

Global warming – The heating up of the Earth caused primarily by the burning of fossil fuels (oil, coal and natural gas), which releases heat-trapping carbon dioxide into the atmosphere.

Greenhouse gas (GHG) – A gas that traps heat and contributes to global climate change.

Liquefied Natural Gas (LNG) – Natural gas that has been converted into liquid for ease of storage and transportation.

Methane (CH₄) – A potent greenhouse gas, and the principal ingredient in “natural gas.”

Renewable energy – Energy that comes from resources that are continually replenished, such as sunlight, wind, rain, tides, waves and geothermal heat.

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CCPA
CANADIAN CENTRE
for POLICY ALTERNATIVES
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Canadian Centre for Policy Alternatives – BC Office

The CCPA is an independent, non-partisan research institute concerned with issues of social, economic and environmental justice. www.policyalternatives.ca



British Columbia Teachers' Federation

The British Columbia Teachers' Federation (BCTF), established in 1917, is a social justice union of professionals representing public school teachers in BC, Canada. www.bctf.ca

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THE UNIVERSITY OF BRITISH COLUMBIA

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