Climate Change Connections in the B.C. Curriculum:

Kindergarten - Grade 3

BRITISH COLUMBIA | Ministry of Energy and Climate Solutions

BRITISH COLUMBIA | Ministry of Education and Child Care

Land Acknowledgement

Indigenous Peoples have lived in reciprocal relationships with the lands, waters, animals, and plants across what we now call British Columbia since time immemorial. They have long observed changes occurring due to climate change and have been sounding the alarm about the potential for irreversible impacts for decades.

Despite being least responsible for the climate crisis, Indigenous communities experience heightened climate risks as their lives and livelihoods are interconnected with the land, compounded by structural inequities and legacies of colonization. Amid these challenges, Indigenous Peoples have continually adapted and applied their knowledge of the land to supporting their communities and territories and strengthening the resilience of the province.

Understanding the importance of the lands we are on and following the leadership of the original caretakers of these lands is foundational to how we educate and respond to climate change.

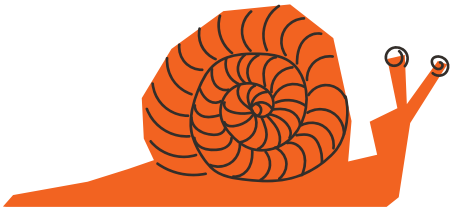
Table of Contents

Feedback Survey

Please share any feedback you have about this resource by clicking on the link below or scanning the QR code.

https://form.simplesurvey.com/f/s/K-3_Climate_Change_Feedback

The Climate Action Secretariat will consider your feedback in future iterations of this document and any other associated resources.



Connecting to Climate Change

Purpose

The climate is changing and affecting communities across B.C. and the world, impacting lands, waters and ecosystems. Teaching about climate change in the classroom and providing accurate, age-appropriate information can help students to foster hope and develop climate literacy. Climate change education incorporates hands-on experiences, personal values, scientific content, and action that empowers young learners to make choices that will positively influence themselves, their family, their environment, and their communities.

Through valid, science-based information and locally adaptable teacher-created learning stories, this resource is designed to provide a practical, curriculum-aligned starting point for Kindergarten – Grade 3 (K-3) teachers in B.C. to teach about climate change in their classrooms. It aims to contextualize climate change in B.C. and emphasizes learning opportunities that support the Core Competencies and are in alignment with the First Peoples Principles of Learning. It is authored in partnership with B.C. teachers, by climate change specialists at the Climate Action Secretariat in the Ministry of Energy and Climate Solutions, with support from curriculum specialists at the Ministry of Education & Child Care.

Development of this resource

A team from the Climate Action Secretariat (CAS) began engaging with B.C. teachers in 2021 to learn how B.C. government could support their commitment to helping educators, students, families and communities better understand climate change and its impacts.[1] During this engagement, teachers expressed a need for curriculum-aligned climate change education materials from a trusted source, especially for K-3 students. The CAS team conducted focus groups with K-3 teachers from the B.C. Teachers' Federation (BCTF) which led to the co-development of this resource.

In 2023/2024, CAS worked with a team of BCTF K-3 teachers to develop a series of learning stories on climate change that are accurate, age-appropriate, and adaptable to regions across B.C. These learning stories are attached at the end of this resource and samples are included to highlight the climate literacy learning strategies. The Province continues to collaborate with education professionals and teachers on professional development support and future climate change education resources. Any external references throughout this document were vetted to be accurate at the time of production of this resource, but content may change in the future.

1 B.C. Climate Preparedness and Adaptation Strategy

What is Climate Literacy?

Climate literacy refers to having a basic understanding of how humans impact the climate and how the climate impacts us.

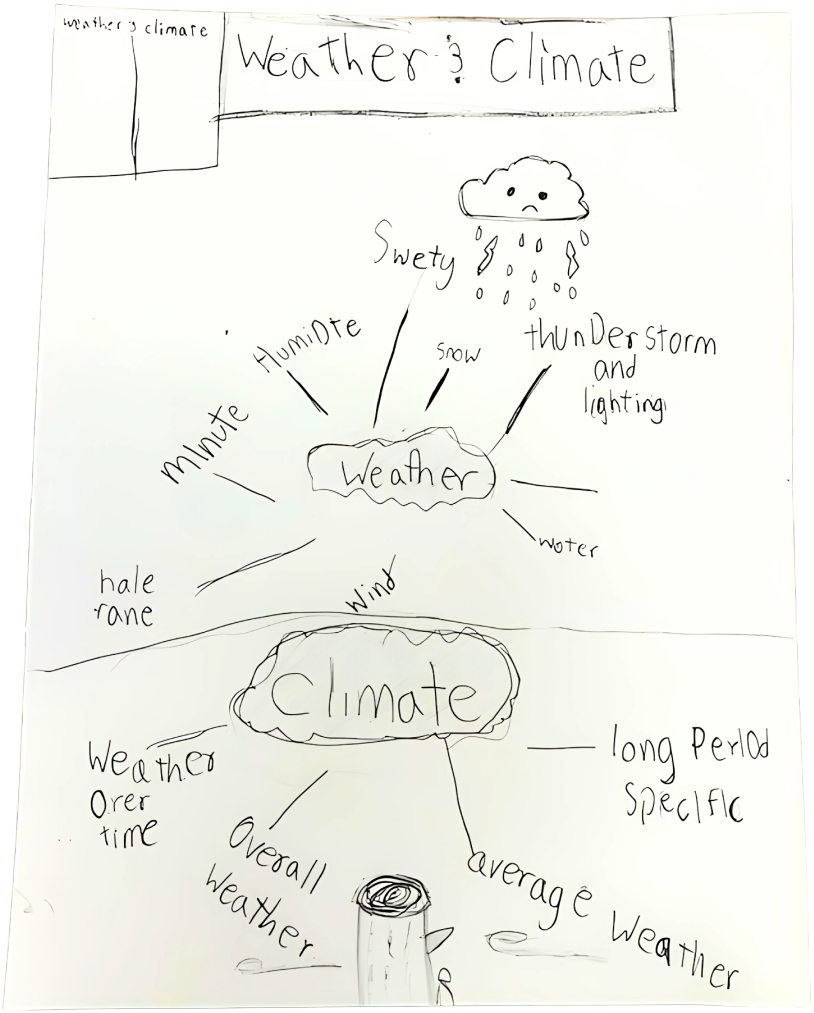
You do not have to be a climate expert to be climate literate.

A climate literate person:[2]

- Knows how climate change is impacting them, their community, and society at large
- Can meaningfully communicate about climate and climate change
- Can understand how their decisions and actions may impact the climate
- Understands the basics of Earth's climate system

Building climate literacy among young learners requires accurate and developmentally appropriate climate change education. It should equip students with the knowledge and skills to act on climate change and address the emotions that come along with this learning. It can also enable students to share what they learn with their communities, passing on their knowledge and awareness to those around them.[3]

This resource is designed to give educators tools to raise climate literacy among students, while incorporating climate change in a holistic, cross-curricular education that supports the B.C. learning standards and the First Peoples Principles of Learning.



Student work from the learning story "'Grade 3: Climate Change - Small Steps to Collective Action" on page 59

2 Adapted from What is Climate Science Literacy?, National Oceanic and Atmospheric Administration.
3 Strengthening their climate change literacy: A case study addressing the weakness in young people's climate change awareness, Alina Kuthe et al (2020); Children can foster climate change concern among their parents, Danielle F. Lawson et al (2019); Environmental learning across generations: spontaneous encounters and interactions between young children, mothers and teachers, Jane Spiteri (2022).

Climate Change – A Background

Climate change is a shift in the expected weather patterns in a certain area at a certain time of year. [4]

Long-term changes to the climate occur naturally over centuries due to changes in the sun's activity and large volcanic eruptions. However, climate changes are now happening at a much faster rate due to human activities, mainly the burning of fossil fuels such as coal and oil.

There is nearly unanimous scientific consensus on human-caused climate change. Scientific measurements show long-term shifts in average temperature, precipitation, wind, and weather patterns. This evidence is reaffirmed by First Nations peoples in B.C. who have used oral traditions to record major weather events and observations of the land going back further than any written records and have perceived changes in weather patterns and declines in biodiversity that have exacerbated the degradation of traditional lands and cultural resources.

Communities across B.C. have experienced record-breaking heat waves, hotter and more frequent wildfires, more intense floods, and changes in snowpack, resulting in water shortages, decreasing food production and more resources needed for disaster preparedness and recovery.

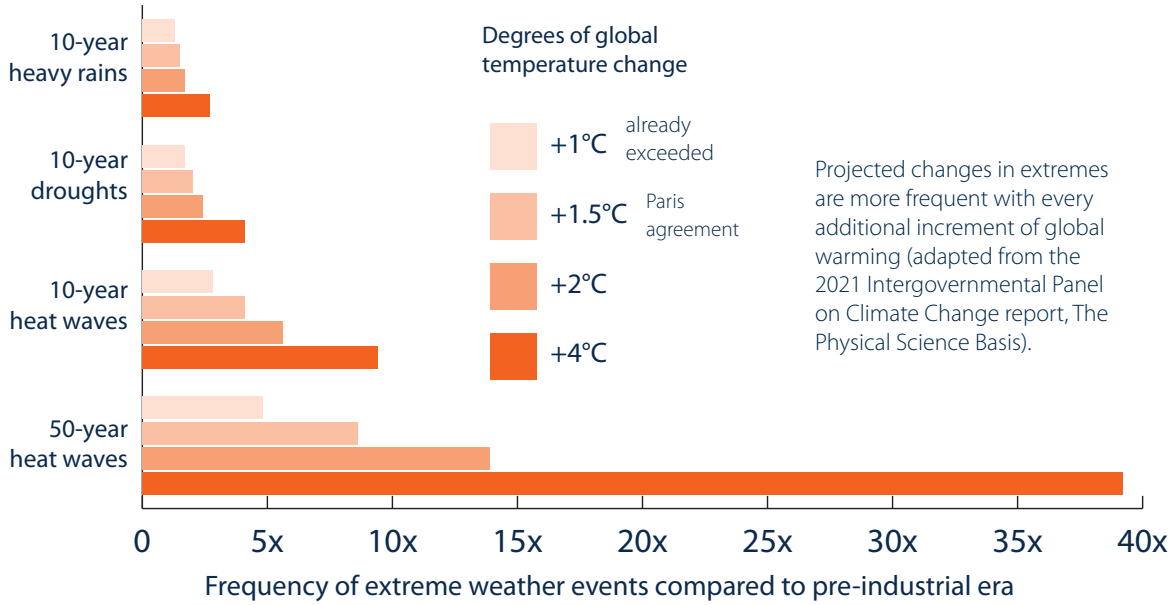
Explore climate change impacts in your region of B.C. on the CleanBC website.

"Learning is embedded in memory, history, and story."

-First People's Principles of Learning

Consider reaching out to a local First Nation or accessing a local Indigenous Resource to learn more about climate change in your area.

Increased frequency of extreme weather events due to climate change



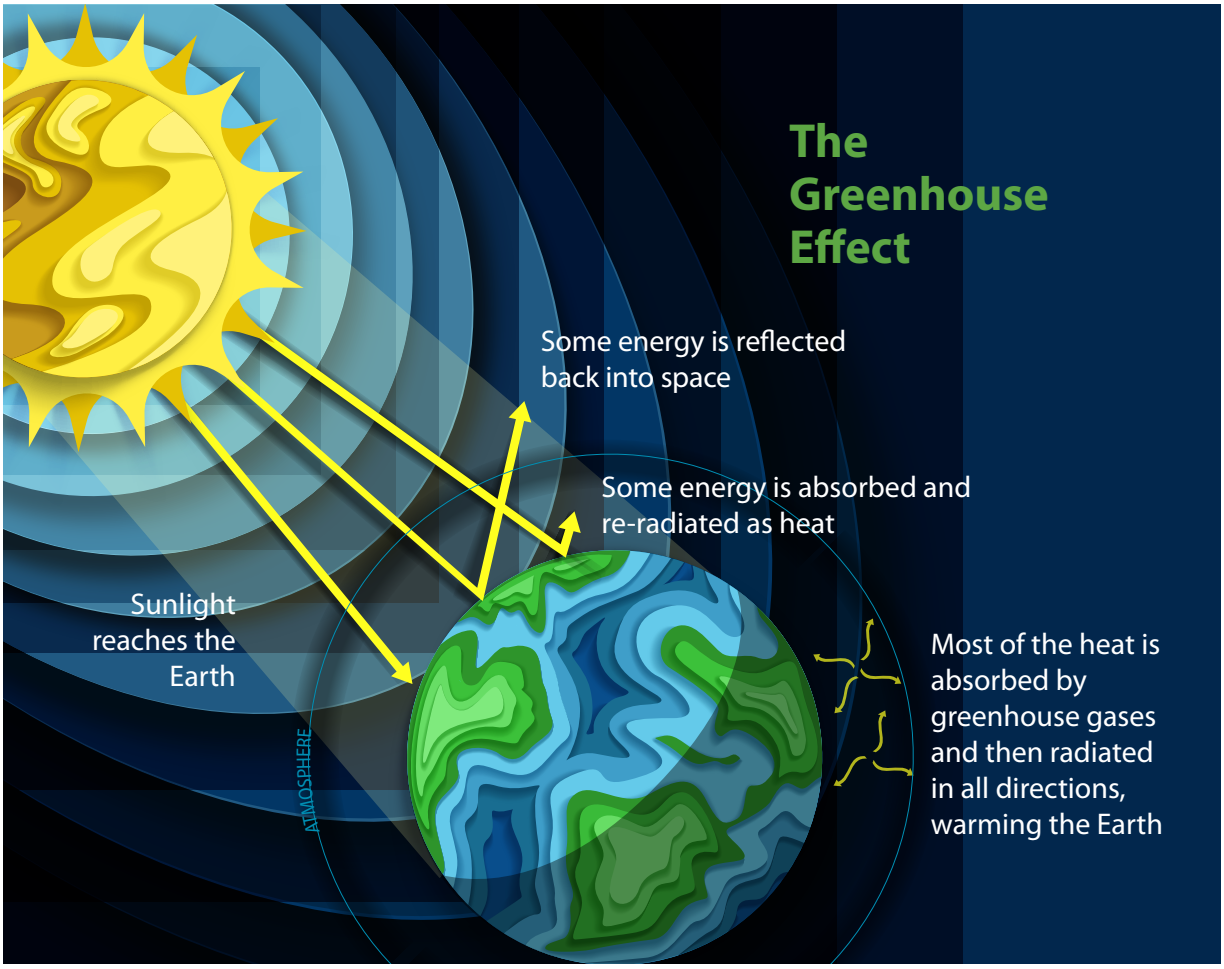
4 About Climate Change, Government of British Columbia.

Climate change drivers

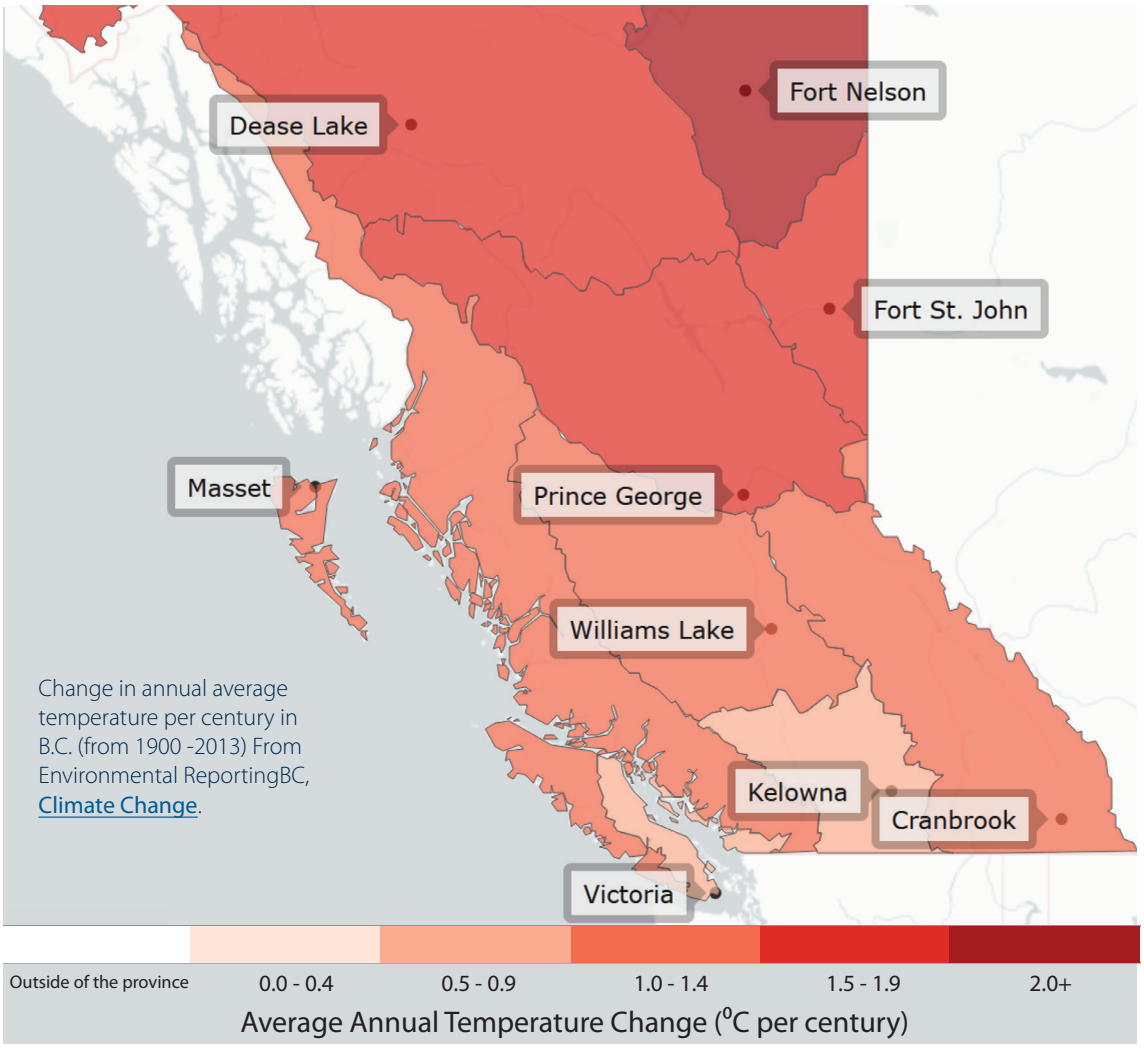
The main driver of climate change is the use of fossil fuels.

We use fossil fuels in transportation, industrial processes, and to heat our buildings and homes. When we burn fossil fuel products including gasoline, natural gas, and diesel, gases such as carbon dioxide, nitrous oxide, and methane are released into the atmosphere. These gases work like a greenhouse, trapping heat and warming the planet. We call carbon dioxide and other heat-trapping gases 'greenhouse gases' (GHGs) in reference to this effect.

Other drivers of climate change include agriculture, waste management, and land-use changes, including deforestation. Learn more about the drivers of climate change and the greenhouse effect on the CleanBC website.



Adapted from the National Aeronautics and Space Administration, The Causes of Climate Change



We're all in this together

Climate change is already affecting B.C.'s people, economies, and ecosystems. Communities and individuals must meet new challenges as disasters like forest fires, heat domes, and atmospheric river events increase in frequency, complexity and intensity. Understanding these impacts with a regional lens is part of the solution as climate change impacts vary across the province, reflecting differences in local ecology, landscapes, economies and social systems. Learn more about your community's potential climate risks and adaptation measures at ClimateData.ca and Climate Ready BC.

All people and types of skills are needed to address climate change – whether they are adopting cleaner technology, building ecosystem resilience by removing invasive plants, caring for neighbours during extreme weather or improving their community's emergency preparedness. Explore opportunities to get involved or to learn from the organizations, businesses, and local governments where you live that are taking climate action.

Local Climate Action

These stories highlight a few examples of the many ways B.C communities are addressing climate change. Find more examples on the Local Government Climate Action Program dashboard or reach out to your local government to learn more about the ways your community has been taking action.

Local partners have been working on a multi-use pathway along Highway 16, connecting Telkwa and Smithers. This twelve-kilometre pathway enhances active transportation options, such as biking, promotes safer and more accessible travel within the district, and fosters community connectivity through sustainable travel choices.

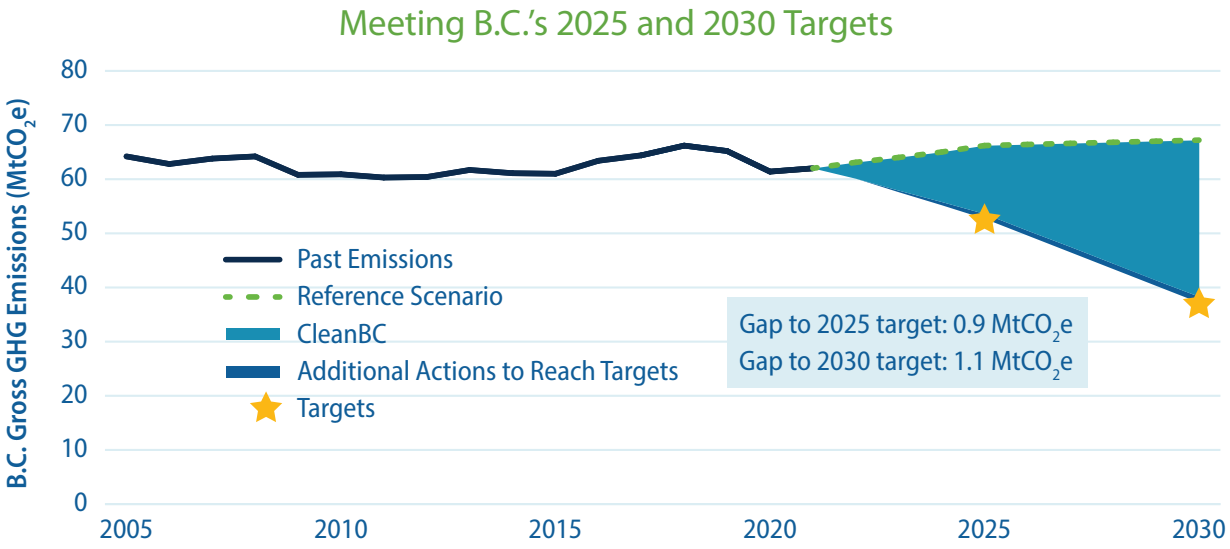
The City and District of North Vancouver, the District of West Vancouver, the Squamish Nation, the Tsleil-Waututh Nation, and North Shore Emergency Management are partnering on an extreme heat resilience project for the North Shore. They are providing information on where to stay cool during extreme heat and North Vancouver is ensuring new buildings are designed to mitigate the risk of overheating and residents have support to install heat pumps, which provide energy efficient, low carbon heating and cooling.

The Yuułuʔiłʔatḥ First Nation and the Alberni-Clayoquot Regional District on the West Coast of Vancouver Island implemented a three-stream solid waste management service, diverting organics and recyclables from the landfill and introducing roadside waste pickup to their residents. They are further investing in the circular economy by using the soil from their compost for landscaping and the community garden. In their first year, they diverted an average of 175 kg of waste per household from the landfill.

Climate Change Mitigation and Adaptation

There are two main pathways to address climate change. Climate change **mitigation i**nvolves reducing the greenhouse gases that we release into the atmosphere which warm our planet and change the climate. Examples of mitigation measures include using clean electricity, riding a bike instead of driving a car, consuming more local food, and changing how we heat and cool buildings. In B.C., the provincial government released the CleanBC plan in 2018 and the CleanBC Roadmap to 2030 in 2021, both of which outline strategies to mitigate climate change in the province and meet legislated GHG emissions reductions targets.

Climate change **adaptation** involves preparing for and building resilience to the expected impacts of climate change, including floods, wildfires, hotter temperatures and sea level rise. Examples of adaptation measures include fire smart programs, restoring wetlands to reduce flooding, and educating the public on how to safely evacuate in an emergency. The government of B.C. is acting on their Climate Preparedness and Adaptation Strategy, released in 2022, to help communities in the province adapt to climate change.



B.C. plans to mitigate climate change by reducing emissions across the province by 40% by 2030 (2023 *Climate Change Accountability Report*).

Strategies for Teaching Young Learners about Climate Change

K-3 learners are developing abstract reasoning skills, self-regulation, an understanding of self and others, an awareness of different lived experiences, and strategies to collaborate with others to address local and global issues.

Future leaders need critical thinking and social, emotional, and communication skills to innovate and engineer solutions to global problems. Starting in the primary years, teachers can use the strategies below to support students, while also helping them develop a deep understanding of climate science over time.

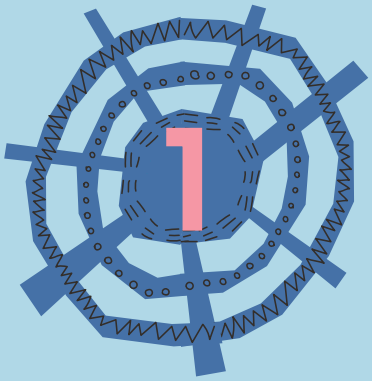
Learning outcomes can build upon each other throughout K-12 education, creating climate conscious students who are able to act on climate change and share their knowledge and interest with others.

"Learning involves generational roles and responsibilities."

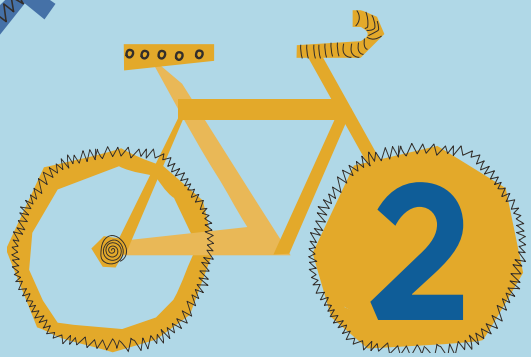
-First Peoples Principles of Learning

Young learners can have a role in influencing the decisions and behaviours of older generations.

Climate change education strategies:[5]



Teach about climate change across learning areas



Encourage action and foster hope

Make climate change education personally and locally relevant

5 Adapted from Climate Literacy and Education Action Network

Supporting Pedagogies

Place-based education

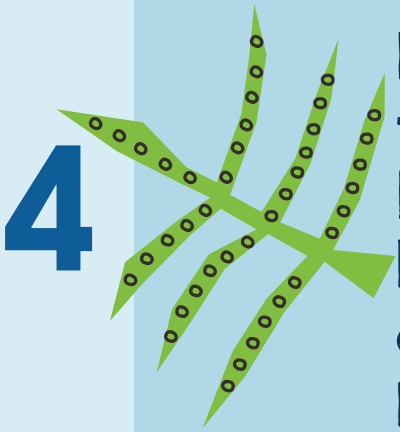
- Learning is centred in local relationships, communities, and physical places, and links to local Indigenous knowledge, cultures, and people.
- Acknowledge that students at this developmental stage are becoming citizens of their local community and recognize that climate challenges and solutions differ from place to place.
- Building a sense of citizenship in the community and caring about place (including land and creatures) is integral to climate literacy.

Play-based education

- Play is essential to learning and well-being.
- The BC Early Learning Framework emphasizes the value of play for developing new ideas, solving problems, and experiencing and exploring the world. Empowering free play makes space for experimentation, imagination, and transformation at a time in development when students are experiencing complex social/emotional changes.
- Learning may include songs, rhythms, art, stories, or humour to communicate, allowing students to play with knowledge in creative ways that connect to their own cultures or experiences.

Inquiry-based education:

- Learning occurs through experimentation, observation, and questioning.
- Lessons allow students to explore their own ways of thinking while developing abstract reasoning skills, curiosity and creativity.
- Inquiry can foster a deeper understanding of the connection of humans to the world and to the climate.

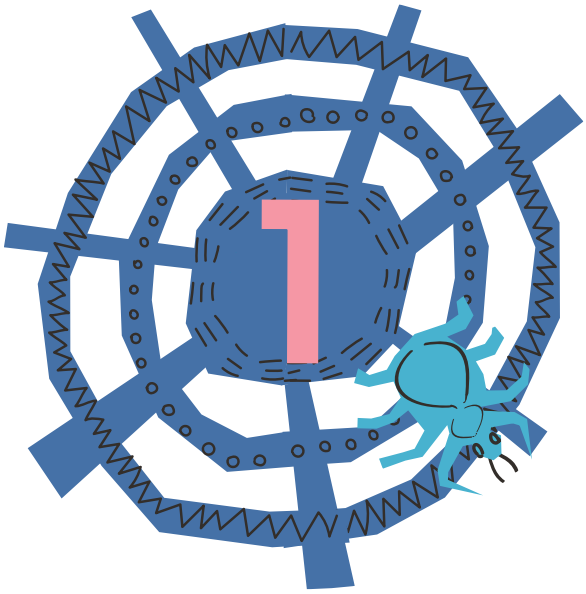


Recognize the role of Indigenous knowledge and ways of learning

Ground students in place-based learning

Keep learning experiential, embodied, and playful

We elaborate on each strategy and highlight their use in practice through example learning stories. See the Sample Learning Stories at the end of this resource for more examples that you can use or adapt for your own teaching practice.



What is Environmental Learning?

A Guided Inquiry for Educators

Environmental learning in the B.C. context can be seen as a composite of three distinct, yet overlapping forms of learning:

- Environmental 'Seeing',
- 'Communication and Action'
- Environmental 'Thinking'

Student inquiry on climate should respectfully incorporate diverse forms of knowledge, including aspects of Traditional Ecological Knowledge (TEK) practised by First Peoples in the diverse ecologies, landscapes and communities found around the province.

Through guidance on Land-based and place-based forms of education, climate change education, education for sustainable development, ocean literacy, and education for social and environmental justice, this framework offers a model for introducing environmental learning in all settings. It provides diverse and overlapping perspectives that can help to facilitate students' ideas about the environment and holistically integrate environmental thinking and ideas into their everyday lives. It also provides guiding principles on environmental learning that can help educators to design activities for varying learning contexts.

Visit the Institute for Environmental Learning to access this resource and learn more.

Strategy 1: Teach about climate change across learning areas

Climate change is an interdisciplinary topic requiring interdisciplinary learning. Climate change education includes teaching about the relationship between greenhouse gas (GHG) emissions and climate, the effects of climate change on the environment, and the physical, social, and emotional impacts of climate change on people and communities. It includes helping students to understand climate change and to develop care for as well as a sense of agency in their community and environment.

Finding and enacting climate solutions requires a variety of skills, including math, communication, and creativity. Building climate literacy includes emphasizing the many facets of climate change and understanding it from many perspectives.

Curricular Connections

The B.C. curriculum is concept-based and competency-driven, providing opportunities for climate literacy to be incorporated across learning areas and grade levels. Through this learning, students can also develop and practice key Core Competencies (thinking, communication, personal and social).

B.C. teachers and curriculum specialists identified a list of age-appropriate topics related to climate change and their curricular connections in the table below. The suggested lines of inquiry are intended to be generative and to spark inspiration for teaching, rather than to be prescriptive requirements.

See the "Learning Stories" on page 35 to find illustrative examples of how B.C. teachers taught about these climate topics in their own classrooms and sparked engagement in climate change with their students.

Climate Connections to Curricular Competencies and Content

ADST = Applied Design, Skills, and Technologies • CE=Career Education • ELA=English Language Arts • FLP=French Language Première • PHE=Physical and Health Education • Sci=Sciences • SS=Social Studies

Climate Topic	Suggested Lines of Inquiry	Connections to Curricular Competencies & Content
Modes of transportation	• Identify different modes of transportation in their communities including green transportation (such as biking and public buses) and traditional modes of transportation (such as hiking and canoeing) • Understand how transportation choices impact emissions, pollution and the world around us	• Math: Develop, demonstrate, and apply mathematical understanding through play, inquiry and problem solving (calculate number of cars on the road, etc) • PHE 3: Identify and describe opportunities for and potential challenges to being physically active at school, at home and in the community • SS 1: relationships between a community and its environment
Energy literacy	• Understand what energy is and that energy can generate electricity • Understand how different types of energy can cause pollution or be 'clean' • Understand where electricity comes from in BC • Articulate that to reduce energy emissions, we need to reduce energy use and/or use low-emission energy • Recognize that there are facilities where electricity is created and people who work there	• ADST: Explore the use of simple, available tools and technologies to extend their capabilities (create a windmill) • CE K: connections to the community: jobs in the local community • Sci 3: sources and transfer of thermal energy
Climate Change	• Know the difference between weather and climate and the connections between the two • Know that the climate is changing, and humans are the leading cause • Understand that humans can enact climate change solutions and adapt to prepare for climate change impacts • Feel empowered to take action • Understand the carbon cycle	• CE 3: Goal-setting strategies: Identify steps required to help achieve short-term goals • Math: Represent mathematical ideas in concrete, pictorial, and symbolic forms (study graphs representing changes in temperature, glacial ice cover or sea levels) • Sci 3: Identify some simple environmental implications of their and others' actions • Sci 3: Contribute to care for self, others, school and neighbourhood through personal or collaborative approaches • Sci 3: The knowledge of local First Peoples of ecosystems • SS 1: relationships between a community and its environment (climate mitigation strategies within a community)
Where does food come from?	• Understand where food comes from beyond grocery stores • Understand how food choices impact emissions, pollution, and health • Explore and understand food waste – what it is, where it goes when it's thrown away, and how it impacts people and the environment • Think critically about how far food travels and the implications of this transportation • Identify some traditional foods from their area	• CE K/1: Identify and appreciate the roles and responsibilities of people in their schools, families and communities • ELA 3: Create stories and other texts to deepen awareness of self, family and community • Math: Model mathematics in contextualized experiences (create a map or timeline to show the journey of food) • PHE K: Identify and explore a variety of foods and describe how they contribute to health • Sci 1: Local First Peoples knowledge of the local landscape, plants and animals • SS 1: Relationships between a community and its environment

Climate Topic	Suggested Lines of Inquiry	Connections to Curricular Competencies & Content
Repairing, Reusing, and Sharing	• Feel empowered to reuse, repair, borrow, and share • Understand what happens to waste after the garbage or recycling bin and how it impacts humans and the environment • Identify local makers and fixers • Connect consumption of new products and waste to transportation emissions • Explore the idea of waste – what is waste? Which items can be repaired or repurposed? Are there things we wouldn't throw away and why?	• Arts K: Explore elements, materials, technologies, tools, and techniques of the arts • ELA 1: Plan and create a variety of communication forms for different purposes and audiences (create an ad or procedural writing about 3Rs) • Sci 2: Observe objects and events in familiar contexts • Sci 2: Sort and classify data and information using drawings, pictographs and provided tables
Outdoor Spaces	• Know how to care for outdoor spaces • Feel empowered to spend time outside • Recognize biodiversity • Foster a connection to land, place, and local ecosystems • Identify natural solutions to climate change (such as trees) and climate adaptation (such as flood plains)	• FLP 3: Express oneself with accuracy and fluency using the strategies studied (nature journal) • PHE 3: Explain how participation in outdoor activities supports connections with the community and environment • Sci K: Living things make changes to accommodate daily and seasonal cycles • Sci K: Experience and interpret the local environment • Sci 3: Identify First Peoples perspectives and knowledge as sources of information
Be ready for big weather	• Understand the connection between climate and big weather • Empower students to be prepared for big weather • Identify local weather phenomena and what impacts they might have on local infrastructure • Learn about emergency preparedness and how the local community responds to big weather • Engage in opportunities to help those in their community prepare for big weather • Learn about climate risks and big weather locally	• CE K: Identify and appreciate the roles and responsibilities of people in their school, families, and community • ELA 3: Stories and other texts help us learn about ourselves, our families, and our communities • Sci K: Weather and seasonal changes • Sci K: Experience and interpret the local environment • Sci K: First Peoples Knowledge of seasonal changes • SS 2: relationships between people and the environment in different communities
Classroom Compost	• Empower students to compost • Learn where waste goes after it gets put in a bin • Learn about the decomposition cycle and how compost contributes to new growth/food	• CE: Roles and responsibilities at home, at school and in the local community; jobs in the local community • FLP 2: Collaborate with peers, and take their views and ideas into consideration to achieve a common goal • Sci 2: physical and chemical ways of changing materials
Packaging Waste	• Learn where items go after the garbage or recycling bin • Empower students to reduce or reuse packaging or use sustainable forms of packing • Understand why we use packaging	• Art 2: Experience, document and share creative works in a variety of ways • ELA 2: Use sources of information and prior knowledge to make meaning (research 3Rs) • Math 3: construction of 3D objects (create packaging with the same volume but less materials waste) • SS K: rights, roles, and responsibilities of individuals and groups

ADST = Applied Design, Skills, and Technologies • CE=Career Education • ELA=English Language Arts • FLP=French Language Première • PHE=Physical and Health Education • Sci=Sciences • SS=Social Studies

Access **complete learning stories at the end of this resource**, which include connections to the core competencies and First Peoples Principles of Learning, as well as student work samples, and/or assessment criteria.

These accurate, age-appropriate learning stories were developed by a team of BC Teachers' Federation K-3 teachers and are adaptable to regions across B.C. Each one demonstrates how these teachers used the strategies outlined in this resource to support learning about climate change and shows how climate change can be interwoven and used as a vehicle to deliver the learning standards of the B.C. curriculum.

Learning story excerpts are marked with a lightbulb and demonstrate each climate literacy learning strategy in action.

Teach about climate change across learning areas

Learning Story Example: Planet Friendly Ways of Getting to School, Kindergarten-Grade 1

Access the full learning story on page 51.

This learning opportunity engages literacy and numeracy skills to teach students about different types of transportation and how they relate to emissions and climate change. Students identify how they get to school, create a class chart to see patterns amongst their peers, take a walk to learn about emissions, and journal about what 'planet friendly' transportation options they have.

Curricular Competencies and Content

English Language Arts	• Use personal experience and knowledge to connect to stories and other texts to make meaning • Oral language strategies - making personal connections, taking turns, making relevant contributions to discussion
Math	• Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
Physical and Health Education	• Identify opportunities to be physically active at school, at home, and in the community
Social Studies	• Recognize causes and consequences of events, decisions, or developments in their lives • Relationships between a community and its environment • Roles, rights, and responsibilities in the local community

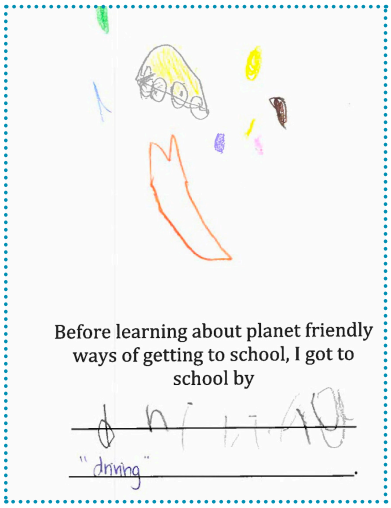
Sample process

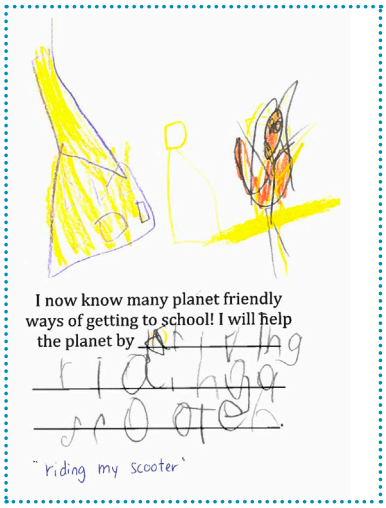
1. Have students share how they got to school - create a class chart and discuss.
    - Possible discussion questions: What are the most common ways that students get to school? What modes of transportation do they like the most?
2. Take students on a class walk to observe emissions/ pollution coming from cars. Note that emissions may be odourless and colourless.

- Possible discussion questions: What are they seeing and experiencing? What types of transportation cause less or no pollution? What impacts does pollution have on us and our planet?
- This is an opportunity to connect ideas of pollution to climate change.

3. Have students journal and draw about how they get to school and what planet friendly ways there are to get to school and/or other places they visit often.
4. Consider having a guest speaker who owns an electric car or commutes by bike.
   - Possible discussion: Do electric vehicles/bikes cause emissions? What do they like about travelling by electric car/bike?
5. Consider doing a class Green Ways of Getting to School Challenge
   - Track how students get to school for two weeks and see if they can increase the number of planet-friendly trips to school. Some students can not change how they get to school, so consider tracking other trips depending on your class and community (such as walking or carpooling to play-dates or sports).
   - Participate in Go By Bike Week and access their Resources for Schools to support your class challenge.

"My students really enjoyed going on a class walk to see what emissions look like and I felt that this was crucial to their understanding. Having students each create a page for the class book was a great way to formatively assess students' understanding."





This student shared that they usually drive to school. They mentioned they wanted to talk to their family and tell them that we need to try to walk to school or "make it fun by riding my scooter."

They talked about how walking to school or riding their scooter would help make their muscles and body strong.

Strategy 2: Encourage action and foster hope

To create a positive learning environment and encourage action around climate change, it is important that learning opportunities produce hope and are grounded in accurate and relevant information, while empowering students to think critically and make decisions about how to act on climate change. For young learners, focusing on solutions and their observable effects can motivate students to continue to adopt climate friendly behaviors and help to mitigate anxiety around climate change.

Addressing climate anxiety in children[6]

Climate anxiety (also referred to as climate distress, eco-anxiety, or climate grief, among other terms) describes the distress and mental health impacts resulting from knowledge about climate change and fear for the future with a changing climate. It can look different in different people, but often manifests as sadness, fear, stress, or guilt. Amongst Canadians, climate anxiety is particularly prevalent among young people[7] and in B.C., researchers found that climate anxiety significantly increased after the 2021 heat dome, indicating the impacts that climate-related disasters can have on mental health.[8]

Children are especially vulnerable to climate anxiety due to their increased risk of impact from future climate-related changes, their heightened vulnerability to extreme weather events, and their dependence on adults and communities which may be impacted by those events. They may also feel a sense of powerlessness and resentment towards adults whom they see as responsible for meaningful action and solutions.

> "Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors."
> -First People's Principles of Learning

The following strategies help students to cope with difficult emotions related to climate change and can be a guide for addressing climate anxiety when teaching about these sometimes-overwhelming concepts.[9] The emotional skills that students may build through these exercises can also be supportive to developing overall well-being skills. They are incorporated throughout this resource in all recommendations and included in the learning story examples.

- Listen to students and validate their feelings, ensuring a trauma-informed approach that recognizes students may have already experienced climate change impacts and/or witnessed its effects on loved ones.
    - Indigenous students may also be experiencing indirect impacts of climate change, such as cultural disruption, food insecurity, and magnified consequences of colonization, that affect their mental health.[10]
- Focus on individual well-being and support students through stress, anxiety, and grief coping strategies, including mindfulness practices and creative expression through play, arts, or journaling.
- Emphasize climate change solutions (mitigation and adaptation) and envision a climate resilient future to promote community well-being and foster hope.
- Provide accurate information and help students identify reliable sources of knowledge.
- Find climate community – talk with other people and take action together.
- Connect to nature and spend time outside.
    - Time outside can include urban or human-made outdoor spaces as well as more wild spaces, all of which are beneficial to students and can help cultivate a sense of care for local places, whatever they look like.

Remember that adults also experience climate anxiety! Make sure that you are practicing coping and self-care practices as well as discussing climate anxiety with your students to build hope and resilience.

Climate anxiety resources

- UBC Climate Hub: Climate Doom to Messy Hope: Climate Healing & Resilience: A Practical Handbook for Climate Educators and Community
- UBC Sustainability: Climate grief toolkit for groups/individuals
- WeMatter Campaign: Toolkit for Indigenous Youth
- Climate Psychology Alliance North America: An Educator's Guide to Climate Emotions

6 Learn more about climate anxiety in Canada from the Mental Health & Climate Change Alliance.
7 Climate emotions & anxiety among young people in Canada: A national survey and call to action, Galway & Field, 2023; Development & validation of a youth climate anxiety scale for the Youth Development Instrument survey, Wu et al, 2023.
8 The 2021 Western North American heat dome increased climate change anxiety among British Columbians: Results from a natural experiment, Bratu et al, 2022.
9 Climate anxiety: Psychological responses to climate change Clayton, 2020); The climate crisis is taking a toll on the mental health of children & young people, Royal College of Psychiatrists, 2020; The climate crisis & the rise of eco-anxiety, Rao & Powell, 2021.
10 Walking Forward Together- The Next Step: Indigenous Youth Mental Health & the Climate Crisis, Brown et al, 2024.

Suggested Resource

Master of Disaster is a free classroom program designed to help young people learn about emergency preparedness and hazards in B.C., including floods, wildfires, earthquakes, and tsunamis. A detailed teacher kit and colourful student kit help guide the class through identifying local hazards, preparing a grab-and-go bag, and making a Home Emergency Plan. It is aimed at youth in grades 4-8 in B.C., but can be adapted for students in grades K-3.

Learn more about the Master of Disaster program.

Encourage action and foster hope

Learning Story Example – Climate Change: Small Steps to Collective Action, Grade 3

Access the full learning story on page 59.

Students use experiential activities to learn about climate change and explore ideas of collective and personal climate action through discussion, written activities, and reflective journaling to empower a solutions-focused mindset.

Curricular Competencies and Content

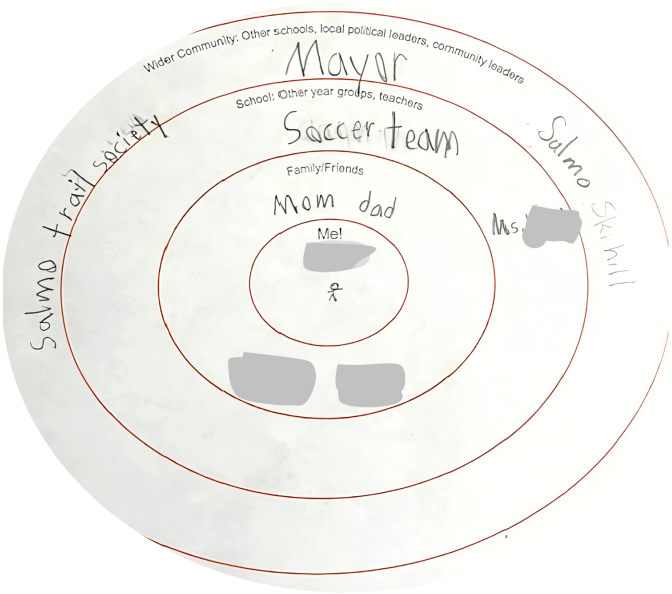
Career Education	• Work respectfully and constructively with others to achieve common goals • Identify and appreciate the roles and responsibilities of people in their schools, families, and communities • Goal-setting strategies: Identify steps required to help achieve short-term goals • Roles and responsibilities at home, at school, and in the local community
Science	• Identify some simple environmental implications of their and others' actions • Contribute to care for self, others, school, and neighbourhood through personal or collaborative approaches • The knowledge of local First Peoples of ecosystems
Social Studies	• Relationships between humans and their environment

Sample process

1. What is Climate Change?
    - Discuss: What is climate change? What causes climate change?
    - Possible resources:
        - 'Climate Change Explained in 5 minutes'
        - 'Climate Change: Crash Course for Kids'
    - Brainstorm climate solutions and ways we can help.

2. Climate Action

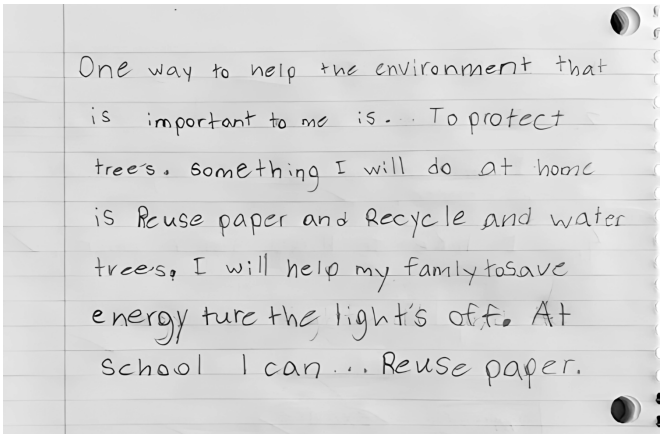
- Review the Global Goals on 'sustainable development', highlighting goal 13, 'Climate Action'.
- Discuss what collective action means. Can students think of examples?
- Class discussion on circles of influence:
  - What impact can 100 children have if they all work on one project? What is one improvement for the Earth you want everyone to focus on?
- Have students complete a circle of influence graphic organizer (template on page 62), thinking about who is in their sphere of influence and how they can work together to create collective action.



Circle of influence graphic organizer

3. Self-Reflection

- Review the actions that students brainstormed in the first activity and discuss the impacts of these actions. Discuss how these actions might influence people in their circles of influence.
- Have students choose an action from the list that they might like to do personally and journal about their choice. Possible prompts:
  - One way to help the environment that is important to me is…
  - Something I will do at home is…
  - I will also encourage my family to…
  - At school, I can also…
  - I can make an influence in my community by…


One way to help the environment that is important to me is... To protect trees. Something I will do at home is Reuse paper and Recycle and water trees. I will help my family to save energy turn the lights off. At school I can... Reuse paper.

A student reflects on what they can do to impact the earth and address climate change.

"The students were keen to discuss all the ways we can help the earth. The discussion was rich, and many hands were up awaiting their turn to share. I think the students were able to see the roles and responsibilities they have at home, at school, and in the local community, as well as the shared responsibility to care for the local environment (stewardship). They gained some awareness of some simple environmental implications of their and others' actions and know how to contribute to caring for nature through personal and collaborative approaches."

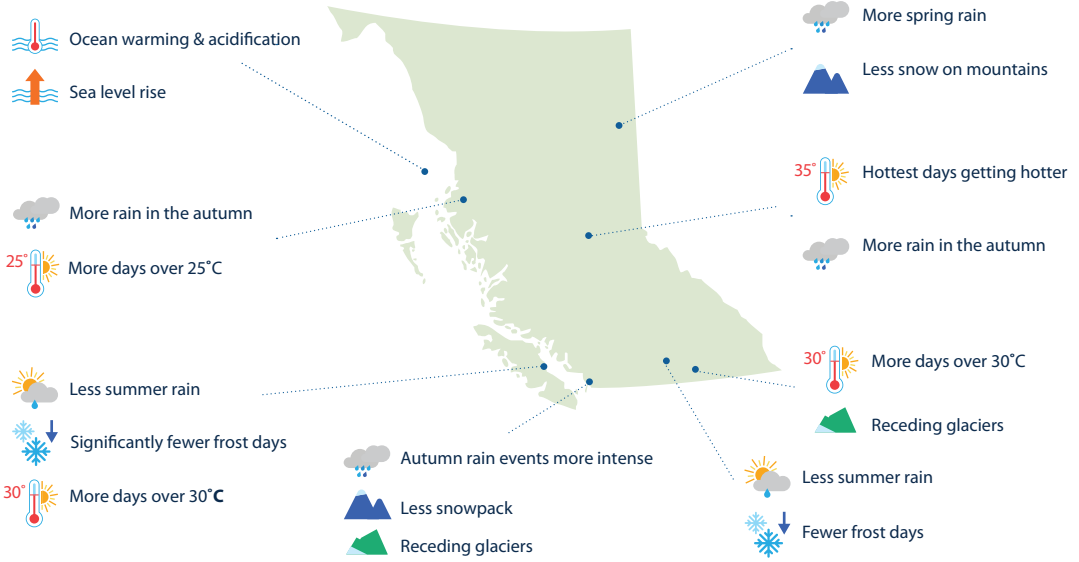
Strategy 3: Make climate change education personally and locally relevant

People act because of what they feel, in addition to what they know. Climate change is a global problem, but when climate change education is focused on far away people and places, students may feel disconnected from both the effects of climate change and the potential solutions. Instead, focusing on what is going on locally and the actions and solutions that their community is engaged in can connect students to climate change on a more personal level. Local First Nations may be experiencing exacerbated impacts of climate change to their lands and culture and provide an important perspective when learning about both the local impacts of climate change and the solutions.

Localizing Climate Change Education

B.C. teachers have expressed concerns about teaching climate change education in schools due to the varying attitudes and beliefs about climate change in regions and communities across the province. Making climate change education inquiry-based and locally focused can address these concerns by emphasizing what students see, hear, feel, and experience.

Empowering student curiosity, highlighting climate change solutions that support the local community, and focusing on place-based learning are methods of teaching about climate change that can bridge ideological and cultural differences. The goal of climate change education is to help students develop an understanding of what is happening in the world around them, no matter their initial position on the issue.



Some of the projected changes for B.C. by 2050 by region. From the Climate Preparedness and Adaptation Strategy, 2022.

When localizing climate change education, educators can connect to specific impacts of climate change in their region. The image above shows some projected climate changes in B.C. for different regions of the province. These changes contribute to impacts including wildfires, floods, and droughts, which can in turn impact air quality, water quality, and food security. To find more about changes to the climate that are happening or may happen where you live, visit ClimateData.ca and Climate Ready BC. In addition to these

anticipated climate changes, communities may already be seeing locally-specific social, cultural, and economic impacts that can be included in climate change education. Consider connecting with local First Nations in your area to learn about local climate impacts from an Indigenous perspective and about how climate change may be impacting cultural practices.

All these changes can bring up strong emotions and spark difficult conversations. Teachers may find that teaching about climate change creates the potential for disagreement and may come across varying attitudes, opinions, or sources of information surrounding the topic. To empathize and connect with different perspectives, it is important to recognize that everyone is on their own climate literacy journey and needs to be met where they're at in that journey. Focusing on tangible local knowledge and experiences may be what is needed for some communities, rather than addressing the large and complex realities of climate impacts around the globe. Emphasizing what students can see, feel, and do can help to connect them with the experience of climate change and empower them to handle the emotions that come along with it. Celebrating the actions that students are already engaged in (like reusing items at home, growing or farming food, carpooling with neighbours) can also support an empowered and strength-based approach to learning and may benefit the community in ways beyond their environmental impacts (such as community connection, local economy, health).

Make climate change education personally and locally relevant

Learning Story Example – Where does food come from?: Class Book, Kindergarten - Grade 1

Access the full learning story on page 47.

In this learning opportunity, students think about the value of eating locally and create a class book. They can identify local food available in their own community and learn about the connections of food and climate through solutions-focused, positive learning.

Curricular Competencies and Content

Career	• K/1: Identify and appreciate the roles and responsibilities of people in their schools, families, and communities
Physical and Health Education	• K/1: Identify and explore a variety of foods and describe how they contribute to health
Science	• K: Ask simple questions about familiar objects and events • K/1: Experience and interpret the local environment • 1: Sort and classify data and information using drawings, pictographs and provided tables • 1: Local First Peoples knowledge of the local landscape, plants and animals
Social Studies	• K/1: Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • K/1: Explain the significance of personal or local events, objects, people, or places • K: People, places, and events in the local community, and in local First Peoples communities • 1: Characteristics of the local community that provide organization and meet the needs of the community • 1: Relationships between a community and its environment

Sample Process

1. Where does food come from? (for this activity, you may use students' lunches, images of sample lunches, or some food items that you have brought into class)
    - Have a classroom discussion. Possible discussion questions: Where did the food come from? Where did it come from before the store? What is it made of? Do you find pizza, bread, pasta, etc. in the wild? What types of food can be grown or produced nearby? What foods are indigenous to this land? (Indigenous foods are defined as foods that are Indigenous to where they are sourced and used pre-contact.)
    - To dive deeper into climate impacts of food: What are the benefits of growing your own food or buying food from a nearby farm? If food comes from far away, how does it travel here? What are the impacts of transporting food for humans, the earth, animals, plants, and oceans? What are the benefits of indigenous foods (often use less water, part of local ecosystem)?
2. Class Book: Create a class book about how eating local food helps people and the planet and how the students might access local food.

"This student talked about how her family visits local farms in the summer and fall to harvest fruit. She talked about how she was looking forward to going berry picking in the summer and apple picking in the fall. [Another student] shared that her family was already talking about growing their own vegetables on their patio. She shared that she wanted to help our planet by helping her family grow vegetables in the summer."

Strategy 4: Recognize the role of Indigenous knowledge and ways of learning

4

Indigenous communities have observations of the land going back much further than written records of weather patterns and climate-related events, giving them deep insights into climate changes over time. Their relationships with place and with the land guide their work to steward the land and mitigate and adapt to climate change. Here in B.C., local First Nations and Metis are leaders in efforts to address climate change and protect the environment. Accordingly, a comprehensive climate change and environmental education should include the knowledge and approaches of First Peoples in the region.

Suggested Resource

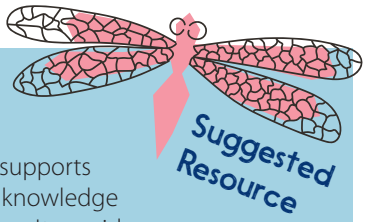
Authentic resources from local Indigenous peoples can support teaching and learning. The First Nations Education Steering Committee searchable library provides age-appropriate First Peoples resources.

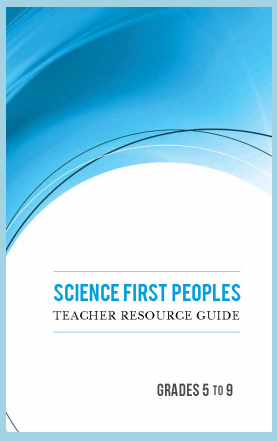
First People's Principles of Learning

- Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.
- Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).
- Learning involves recognizing the consequences of one's actions.
- Learning involves generational roles and responsibilities.
- Learning recognizes the role of Indigenous knowledge.
- Learning is embedded in memory, history, and story.
- Learning involves patience and time.
- Learning requires exploration of one's identity.
- Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.

The First Peoples Principles of Learning support teachers to further incorporate Indigenous knowledge and perspectives into B.C. classrooms and beyond. These principles were articulated by a group of Indigenous educators, knowledge keepers, and scholars in B.C. to identify the principles of learning generally held in common by Indigenous peoples in B.C. They were shared to help identify effective approaches to teaching and learning that resonate for Indigenous peoples.

By recognizing these principles and learning directly from local First Peoples, students can deepen their connections with place and better appreciate the historical and ongoing ecological role of First Peoples in their region.





The Science First Peoples Teacher Resource Guide supports educators to integrate unappropriated First Peoples knowledge and perspectives into science and other learning areas. It provides information on how First Peoples perspectives in science can be recognized and included and offers curriculum planning support for B.C. teachers. It is aimed at grades 5-9 but can be helpful for teachers of other grades as well.

Unit 5 focuses on climate change and walks students and teachers through a background on climate change, the impacts of climate change on salmon resources, and suggestions for inquiry. First Peoples hold an abundance of knowledge about the climate and about how to adapt to changes in the natural world and this unit helps students to think deeply about how we can learn from local First Peoples in this space.

Recognize the role of Indigenous knowledge and ways of learning

Learning Story Example – Connecting with Outdoor Spaces: Earth as a Gift Journaling Activity, Grade 3

Access the full learning story on page 65.

In this learning opportunity, students spend time in a sit spot where they intentionally connect with the land, develop a sense of place, and engage in a discussion about reciprocal relationships and stewardship. Fostering these connections and sense of care is an important foundation for climate literacy.

Curricular Competencies and Content

Science	• Make observations about living and non-living things in the local environment • Identify First Peoples perspectives and knowledge as sources of information • Identify some simple environmental implications of their and others' actions • Express and reflect on personal or shared experiences of place
Social Studies	• Recognize the causes and consequences of events, decisions, or developments

Sample Process

1. In a space outside, have students find a sit spot where they will silently observe the space around them for at least 10 seconds (you can adjust the timing to fit your class). Encourage them to pay attention to any sensations or feelings they experience and to be present in the moment.
    - Consider repeating this activity and gradually increasing the observation time over several weeks.
2. Have the students write a journal and/or draw what they see. Some possible discussion questions:
    - How are they feeling? What is their energy after the sit spot? What were they excited to see?
3. Brainstorm gifts from the earth with the class.
4. Have students write in their nature journals again. Prompts may include:
    - Describe what the Land means to you. What gifts do you receive from the Land? What can you gift the Land in return? Gifts can be physical (water, seeds) or actions/gestures (pick up litter, stay on trails/paths, reduce pollution).

Results from a brainstorm session on 'gifts from the earth.'

5. Finish the sit spot with a Sharing Circle of class observations. Sharing or Talking Circles are traditional Indigenous formats for discussions. Learn more about their significance and how to incorporate them in the classroom in the FNESC/FNSA: BC First Nation Land, Title, and Governance Teacher Resource Guide (pg-1920) or at First Nations Pedagogy Online.

"The students engaged in the First Peoples Principles of Learning in their new deep understanding of the word reciprocity.

They were amazing in Identifying all the ways in which the land gives to us --Safety, space, energy, peace, relaxation, inspiration, comfort, food, flowers, knowledge, and understanding (trees provide shade, wood to burn and to build houses, gardens and food to eat, flowers to enjoy, fun and recreation- swimming, skiing-, water to drink, comfort when we need to calm and regulate... etc.). They created relationships with their trees in our forest and continue to feel connected to them. Once they named all the ways nature provides for us, they understood the relational aspect of needing to give back."

Sit Spot Tips

- Even sidewalks have insects or plants growing between the concrete - be creative with finding the wild.
- A student who is not able to go outside can look out a window or sit with a plant in the classroom.
- Students who struggle to sit still may do moving sit spots. You can also introduce magnifying glasses or viewfinders to sustain attention.
- Sit spots are developed through experience – it may take time for students to get used to. Consider repeating them at different times of the year to observe changes over time and develop the practice.
- Partnering with a buddy class that is less experienced at a sit spot practice creates leadership and mentorship opportunities.

Strategy 5: Ground students in place-based learning

Place-based learning that emphasizes relationality between humans and the world works to build an ethic of stewardship and respect for the environment amongst students. Part of climate literacy includes understanding how personal and collective actions impact climate change and the world around us. A connection to the local place enables students to both see the impacts of climate change in their region and feel an emotional connection that may spur action to care for the land and their community.

Taking students outside for experiential learning and connecting them with their local surroundings can enhance connections to place and support the creation of students' and teachers' ecological identity. It can help to reduce anxiety in students and spark joy, curiosity and excitement about learning. Both 'wilder' outdoor spaces and human-made spaces help students to develop a connection to place. Time outdoors can look different depending on your school and community and may include a visit to a park or garden or might be a walk around your schoolyard or neighborhood. Place-based and outdoor learning have been recognized in many fields, from science to literature to philosophy, as effective ways for students to connect to the land, support mental health and wellbeing, and develop environmental ethics. The B.C. curriculum encourages ways of teaching across subject areas that respect the place where students are and connect to and engage with the surrounding community.

"Connection with place, with the land, is the foundation of Indigenous knowledge."
– In Our Own Words, pg. 15

Outdoor learning can also be an important avenue for bringing local Indigenous knowledge into the learning environment. Although Indigenous worldviews vary from community to community, a connection with the land and environment has a place within the worldviews of many First Peoples, as highlighted in the First Peoples Principle of Learning. Most First Peoples share five concepts of place (adapted from Michell et al., Learning Indigenous Science from Place and FNESC & FNSA, In Our Own Words):

- **Place is multidimensional. It encompasses more than the geographical space, entailing physical, cultural, emotional, and spiritual characteristics which cannot be divided into parts.**
- **Place is a relationship. All life is interrelated. Relationship encompasses human relationships, relationships between people and the land, and relationships between land and other life.**
- **Place is experiential. Experiences an individual has on the land give it meaning. Learners must actively participate in the natural world.**
- **Place is local. While there are commonalities, all First Peoples have unique, individual, and local concepts of place and people are inseparable from the land they inhabit. Stories are connected to place.**
- **Place is land-based. Land is interconnected and essential to aspects of culture and identity. Making connections with place is an integral part of bringing Indigenous perspectives into the classroom. Peoples' perspectives are influenced by the land they are connected to.**

Teachers who would like to incorporate First Peoples' knowledge and approaches in place-based learning can explore *In Our Own Words*. This guiding document from the First Nations Education Steering Committee (FNESC) and the First Nations Schools Association (FNSA) includes units and lesson plans emphasizing the use of authentic First Peoples resources in grades K-3.

Ground students in place-based learning

Learning Story Example – Connecting with Outdoor Spaces: Artful Gratitude Creations, Grade 3

Access the full learning story on page 65.

This learning story employs art and creativity to encourage students to practice gratitude and appreciation towards the place where they live, play, and learn. By developing gratitude and a sense of care, students are building foundations for climate literacy.

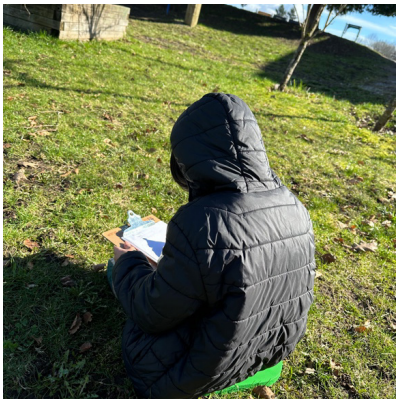
Curricular Competencies and Content

Science	• Make observations about living and non-living things in the local environment • Identify First Peoples perspectives and knowledge as sources of information • Identify some simple environmental implications of their and others' actions • Contribute to care for self, others, school, and neighbourhood through personal or collaborative approaches • Express and reflect on personal or shared experiences of place • Biodiversity in the local environment
Social Studies	• Recognize the causes and consequences of events, decisions, or developments
Math	• Increasing and decreasing patterns

Sample Process

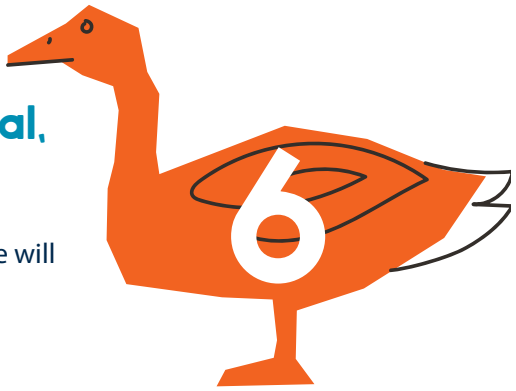
1. Find a place outdoors and have students gather natural items around them (such as fallen leaves, seeds, rocks, twigs). Ensure students don't take parts off living plants or disrupt/damage habitat.
    - This is an opportunity to discuss care, respect and responsibility in nature.
    - Encourage students to observe their surroundings and look for patterns in nature. Do they notice any increasing or decreasing patterns?
2. Invite students to create an image using what they find to represent something they like about the place where they live and learn.
    - This is an opportunity to introduce ideas of reciprocity. You may also discuss how to take care of this place and of the natural items students are using to create their art.
3. Sharing Circle: Do a tour of learners' creations and invite students to share.
    - Sharing or Talking Circles are traditional Indigenous formats for discussions. Learn more about their significance and how to incorporate them in the classroom in the FNESC/FNSA: BC First Nation Land, Title, and Governance Teacher Resource Guide (page 19-20) or at First Nations Pedagogy Online.

"As we built that care and connected what we felt outdoors and the idea that the land "holds us" and "takes care of us", attitudes emerged. Attitudes of responsibility: that stomping on a flower was stomping on a family member. That we wouldn't want that done to us."



Students create art using natural materials outdoors.

Strategy 6: Keep learning experiential, embodied, and playful



> "No one will protect what they don't care about, and no one will care about what they have never experienced."
>
> — David Attenborough

Experiential learning allows students to connect their learning with their feelings, senses, and emotions. Engaging in inquiry and making observations about the world around them engages students' curiosity and can connect climate change with their lived experiences. By activating critical thinking skills and using all their senses, students learn and retain more knowledge. Experiencing the outdoors is particularly important for developing an appreciation for the outdoors, which can give students the opportunity to practice stewardship and reciprocity towards their environment and can spur empathy with their human and non-human communities.

Young learners benefit from play-based learning approaches that trigger imagination, excitement, and interaction. Play can help students to solve problems, work together, and improve their communication skills, especially when given the opportunity for free play and exploration. At the same time, it can spur innovation, creativity, and joy, all of which can help students to learn better and empower them to take ownership and responsibility for their learning.

Keep learning experiential, embodied, and playful

Learning Story Example – Toys Toys Toys: Nature Walk/ Outdoor Exploration, Grade 2

Access the full learning story on page 56.

In this learning story, students think critically about what makes a 'toy' and spend time outside while finding and innovating 'toys' from the natural world. They use play and outdoor exploration to learn about the stewardship of nature and to practice reuse and sharing, which can help them to understand the connection between waste and climate change.

Curricular Competencies and Content

English Language Arts	• Engage actively as listeners, viewers and readers • Use personal experience and knowledge to connect to stories and other texts to make meaning • Reading strategies (using illustrations and prior knowledge to predict meaning, retelling in own words, locating the main idea and details) • Oral language strategies (asking questions to clarify, expressing opinions)
Mathematics	• Use reasoning to explore and make connections • Model mathematics in contextualized experiences • Pictorial representation of concrete graphs, using one-to-one correspondence
Science	• Observe objects and events in familiar contexts • Ask questions about familiar objects and events • Make simple predictions about familiar objects and events • Sort and classify data and information using drawings, pictographs and provided tables • Physical ways of changing materials • Chemical ways of changing materials

Sample Process

1. Go for a walk outside and give time for free exploration/play. Have students identify 'nature toys' that they played with or that could be used as a toy. Take photos of the items, these will be used in Part 3.
    - This is an opportunity to explore ideas around waste, reuse, and responsibility to the environment.
    - Before leaving, remind the students to return nature's 'toys'
2. Make a list of toys in the classroom and create a class bar graph of students' favourite toys.
    - Discuss what the toys are made of and record the class answers.
3. Record the materials used to make both the nature toys in step 1 and the top toys from the graph in step 2. Compare the materials and discuss the differences as a class.
    - Possible discussion questions: How are nature toys made? What happens to the classroom toys over time? To the nature toys? What happens to broken toys in the classroom? In nature? Where did these materials and toys come from? Were they made in a factory? How did they get from there to here?

Class graph of students' favourite toys and the materials they are made from

"It was easy for the children to identify 'nature's toys' as we wove our way through the trail to our outdoor classrooms. We talked about where the forest toy came from and what it belonged to (i.e. stick, came from a tree branch and may come from the Douglas Fir). What surprised me was how easily the children imagined a stick as a person, a fir cone as a ball, a stump as a castle, a twig as a fishing rod."

Students discovering nature toys.

Teaching the Teacher: Professional Development

Climate Literacy for Educators

B.C. K-3 teachers shared some of the ways that they've engaged in professional development to build their climate literacy and grow their climate teaching practices.

Professional Development through experiential classroom learning

Breanne Smith (Kindergarten / Grade 1, New Westminster) created a Butterflyway garden with her students, where they learned about native plants and the importance of pollinators. The class planted native seeds, recorded observations as they grew, and raised butterflies that they released into the garden. At the end of the school year, students took flowers to plant in their own gardens or on their balconies, continuing the conversation at home.

Through this program, Breanne developed a better idea of how to include young students in climate solutions-based learning and how to start these conversations with students in ways they would understand. She also learned more about the benefits of outdoor learning, seeing reduced stress, boosted energy levels, and increased curiosity and problem-solving abilities among her students. Breanne was able to fund this project through a climate grant from her school district.

Mahima Lamba (Kindergarten, Tsawwassen) participates in the Salmonids in The Classroom program, through which her class raises Coho Salmon eggs in a large tank in their classroom and releases the fry into a nearby stream. This experience has piqued student interest in fish habitats and the importance of healthy streams and waterways, with particular attention paid to water temperature. Through this program, both Mahima and the students have developed an understanding of how climate change and extreme weather can impact salmon and how these impacts can affect other animals and plants in the ecosystem. Through this experience, Mahima has developed her own knowledge about the environment and biodiversity and strengthened her passion for conservation.

- Another way to incorporate experiential classroom learning is by starting a school green team.

Leveraging coursework to enhance teaching practices

Marylee Holmes (Kindergarten French Immersion, Nanaimo-Ladysmith) participated in Nature Journaling Professional Development at the Vancouver Botanical Gardens, which helped transform her teaching practice. Through funding from their union for release time and materials, Madame Marylee and several colleagues were able to run Nature Journaling with their classes and spend a full year together reflecting and collaborating on how these lessons influenced themselves and their student's learning.

Madame Marylee finds that engaging in nature journaling deeply enhances her teaching practices by fostering a stronger connection to the natural world, improving observational skills, and developing a more holistic and interdisciplinary approach to education. For her students, nature journaling is a tool for scientific investigation and developing a deeper appreciate for nature. Through a combination of art, writing, and science, it is a way for everyone to observe and learn, build transferable skills, foster mindfulness and an ecological identity, and build community.

Mahima Lamba (Kindergarten, Tsawwassen) participated in the BC Agriculture in the Classroom Foundation (BCAITC) summer institute course using pro-d funds from her local union. She learned about farming and how extreme weather impacts food production, inspiring her to use the school garden to teach about how climate change is impacting food production, connecting to social studies, career education and core competencies like social responsibility. Mahima is continuing to learn with BCAITC through farm tours, virtual cook-a-longs, and running the Planting a Promise program with her class.

Nancy P. (Grade 3, Kamloops) took the 4 Seasons of Indigenous Learning course with the Outdoor Learning School & Store, which supported her journey towards Truth and Reconciliation. She is also working her way through the Outdoor Certification Program, consisting of 30 hours of asynchronous learning for K-12 educators on integrating the outdoors into their teaching practice.

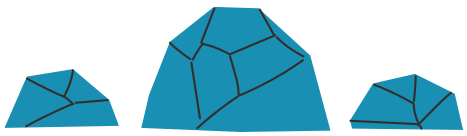
- For further climate action coursework, consider RegenerateBC

Attending conferences to gain knowledge and build community

Nancy P. (Grade 3, Kamloops) attended the Classroom to Communities Annual Pro-D Conference on connecting people, place and planet. She ended up forming a local outdoor and environmental education group with other teachers from the event, eventually turning it into a local chapter of the Environmental Educators Provincial Specialist Association (EEPSA). Nancy then attended the annual EEPSA and Columbia Basin Environmental Education Network leadership clinic, where she set goals for the year and learned from other EEPSA chapters around the province.

Kari-Lynn Hatt (Grade 3/4, Nelson) attended the Take Me Outside Outdoor Learning Conference through pro-d funding from her local union, where she became better able to teach about "the importance of reciprocity, relationship and responsibility." She also developed more confidence teaching about connecting with the land first and then critically and creatively thinking about ways to make big and small changes locally.

The knowledge and tools both educators picked up during these conferences enabled them to implement new games and activities in their classrooms and provided them with more confidence when teaching about the land, environment, and stewardship. They also reflected that conference attendance is a wonderful opportunity to meet with like minded teachers, share resources and ideas, and build community.



Glossary of Terms

Climate adaptation: Preparing for and building resilience to the expected impacts of climate change, including floods, wildfires, hotter temperatures, and sea level rise, among others

Climate anxiety: The distress and mental health impacts resulting from knowledge about or experiences of climate change and fear for the future with a changing climate

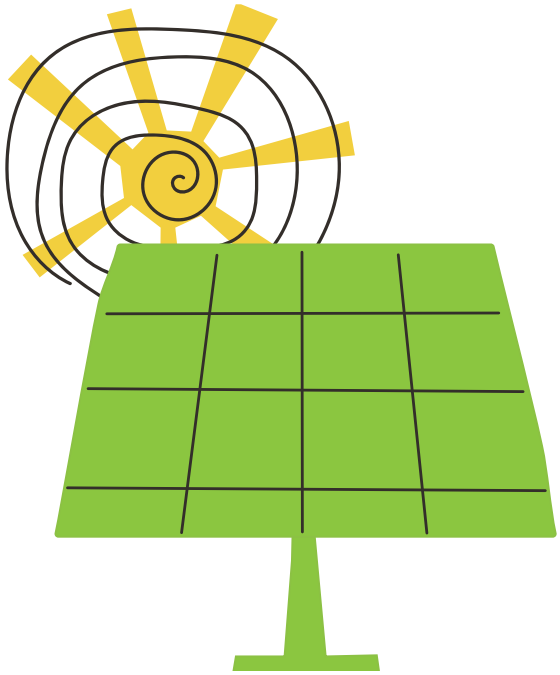
Climate change: A shift in the expected weather patterns in a certain area at a certain time of year

Climate literacy: The understanding of how humans impact the climate and how the climate impacts the environment, individuals and society

Climate mitigation: The reduction of planet-warming greenhouse gas emissions released into the atmosphere

Fossil fuels: Fuels such as oil, natural gas, or coal formed in the geological past from the remains of living organisms

Greenhouse gases: Heat-trapping gases like carbon-dioxide and methane, most of which are released from burning fossil fuels



Learning Stories

Lesson description	Grade	Climate Teaching Strategies	Pedagogical Approaches	Curricular Competencies / Content
Introduction to Big Weather Students learn about the connection between weather and climate change and use art and literacy skills to create stories about big weather.	K	Teach across learning areas Action and hope Personal and local Experiential, embodied, and playful	• Place-based • Inquiry-based	• Career education • English language arts • Science
Nature Journaling Students create a scavenger hunt to practice nature journaling, observational skills, and drawing, solidifying their learning through art and discussion.	K	Teach across learning areas Personal and local Place-based learning Experiential, embodied, and playful	• Play-based • Place-based • Inquiry-based	• Art • English language arts • Physical and health education • Science
Where does food come from? Students go on a field trip, read, and reflect through art about where their food comes from and identify how food choices impact their community and environment.	K-1	Teach across learning areas Action and hope Personal and local Indigenous knowledge and ways of learning Place-based learning Experiential, embodied, and playful	• Place-based • Inquiry-based	• Career education • Physical and health education • Social studies
Planet Friendly Ways of Getting to School Students engage literacy and numeracy skills to learn about the relationship between transportation, GHG emissions and climate change.	K-1	Teach across learning areas Action and hope Personal and local Place-based learning	• Place-based • Inquiry-based	• English language arts • Math • Physical and health education • Social studies
Zero Waste Lunchbox Students explore ideas of waste through an examination of their lunches and engage in a challenge to reduce waste based on what they've learned.	K-1	Teach across learning areas Action and hope Personal and local Experiential, embodied, and playful	• Inquiry-based	• Science • Social studies

Lesson description	Grade	Climate Teaching Strategies	Pedagogical Approaches	Curricular Competencies / Content
Toys Toys Toys Students learn about waste and reuse through an examination of how their toys are made and time spent outside identifying toys found in nature.	2	Teach across learning areas Personal and local Indigenous knowledge and ways of learning Place-based learning Experiential, embodied, and playful	• Play-based • Place-based • Inquiry-based	• English language arts • Math • Science
Climate Change: Small Steps and Collective Action Students use skits, games, and journaling to learn about climate change and explore the ideas of collective and personal climate action.	3	Action and hope Personal and local Experiential, embodied, and playful	• Play-based • Inquiry-based	• Career education • Science • Social Studies
Connecting with Outdoor Spaces Students will explore their relationships with outdoor spaces, practice gratitude towards the earth and make plans to care for the land around them.	3	Action and hope Personal and local Indigenous knowledge and ways of learning Place-based learning Experiential, embodied, and playful	• Place-based • Inquiry-based	• Science • Social studies
Our Carbon Footprint Students explore their 'carbon footprint' and how to be a responsible planetary citizen, while learning about larger scale climate agreements and where GHG emissions come from.	3	Teach across learning areas Action and hope Personal and local	• Inquiry-based	• Art • English language arts • Math • Science • Social studies

Teach about climate change across learning areas (page 14)

Encourage action and foster hope (page 18)

Make climate change education personally and locally relevant (page 22)

Recognize the role of Indigenous knowledge and ways of learning (page 24)

Ground students in place-based learning (page 28)

Keep learning experiential, embodied, and playful (page 30)

Kindergarten: Introduction to Big Weather

This lesson was piloted in a French Immersion classroom.

Learning Opportunity		Students learn about the connection between weather and climate change and use art and literacy skills to create stories about big weather.
Climate Connections		• Basic climate science: weather vs. climate and their relationship • Climate preparedness, resilience and adaptation: community-based solutions to help students prepare for big weather
Strategies and pedagogical approaches		 Teach about climate change across learning areas  Encourage action and foster hope  Make climate change education personally and locally relevant  Keep learning experiential, embodied, and playful • Place-Based • Inquiry-Based
Curricular Competencies and Content	Careers	• Work respectfully and constructively with others to achieve common goals • Identify and appreciate the roles and responsibilities of people in their schools, families, and communities • Cultural and social awareness • Roles and responsibilities at home, at school, and in the local community
	Language Arts	• Use developmentally appropriate reading, listening, and viewing strategies to make meaning • Engage actively as listeners, viewers, and readers, as appropriate, to develop understanding of self, identity, and community • Create stories and other texts to deepen awareness of self, family, and community • The relationship between reading, writing, and oral language • Metacognitive strategies • Oral language strategies • Plan and create stories and other texts for different purposes and audiences
	Science	• Experience and interpret the local environment • Weather changes • First Peoples knowledge of seasonal changes
Core Competencies	Communication	• Communicating: Connecting and engaging with others, Acquiring and presenting information
	Thinking	• Creative Thinking: Creating and innovating • Critical and Reflective Thinking: Questioning and investigating
	Personal and Social	• Positive Personal and Cultural Identity: Understanding relationships and cultural context • Social Awareness and Responsibility: Contributing to community and caring for the environment
First Peoples Principles of Learning		• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning is holistic, reflexive, reflective, experiential, and relational • Learning is embedded in memory, history, and story

Previous Knowledge

- Students have prior knowledge of setting, character
- Students have some prior knowledge about local weather

Process

1. What is Big Weather?

- Provide students with access to various books on big weather that they can explore during reading time or that you can read as a class (see "Suggested Resources" on page 70 for some suggestions).
  - » Possible discussion prompt: What did the characters in the story do when they experienced big weather? How did they get ready for big weather? How did they feel? In the story, did the big weather stay around forever?
- Brainstorm weather that students have experienced or read/heard about.
  - » Some students may have personal experiences with big weather. Ensure that you approach this conversation with a trauma-informed perspective and help manage feelings of anxiety by emphasizing there is help, there are ways to be prepared, and we have ways to predict big weather.

2. Create Weather Storyboards

- Print out a series of 'big weather' backdrops (large images of heavy rain, fire, drought, snow, etc) and, as a class, sort them into a chart based on season. Consider discussing when the big weather happens, how to be prepared, and who might need to help during this big weather.

Big weather backdrops sorted by season

- Review story criteria, including setting, character, structure of a story
- Have students create a story using the printed backdrops and some storyboard materials/loose parts (materials that can be moved, combined, and reused for many activities, including natural materials like rocks, sticks, or leaves, or synthetic materials like blocks, cloth, recycled items, or buckets).
  - » Possible prompts: What big weather did the characters experience? How did the characters prepare for the big weather? Were the characters helped by someone in the community or were they able to help someone else? How did the big weather make the characters feel and what could they do to manage these feelings? How does your story make you feel?
- Students can circulate to see each other's stories and/or share their stories orally with their peers or the whole class.

Assessments

Teacher Assessment Rubric

	Emerging	Developing	Proficient	Extending
	Works with ongoing teacher support	Works with some teacher support	Works independently	Works independently and can support the learning of others
Curiosity and wonder lead us to new discoveries about ourselves and the world around us Language Arts				
Stories and other text can be shared through pictures and words Language Arts				
Through listening and speaking, we connect with others and share our world Language Arts				

Student Self-Evaluation

Social Awareness & Responsibility	Not Yet	I'm Learning	Yes
I can be aware of others and my surroundings			
In a familiar setting, I can interact with others and my surroundings respectfully			
I can interact with others and my surroundings respectfully and thoughtfully			
I can talk about Big Weather			
I can share the story I built			
I can listen to my friend's story			

Teacher Reflections and Sample Student work

Student storyboards about Big Weather created with printed backdrops and classroom materials.

I made several books on big weather accessible to students by adding them to our classroom bookshelf. I allowed students to explore the books on their own during reading time for about a week prior to introducing the topic.

Students built their stories, shared their stories with peers/tables and then I recorded their stories (voice memo). Some students were too shy to share so we recorded their stories with no peers around. Part way through building we walked around and looked at each other's stories. One thing that I found interesting was the variation in how the characters were feeling during their big weather events: sad, mad, angry, scared, brave.

Students were engaged in the learning and contributed to the discussions. This lesson did take much longer than anticipated and I had to break it down into several sessions. Cleanup was time consuming, and it took a long time to voice record everyone's lesson. However, I was grateful to have student voices while completing evaluations.

Teacher: Can you tell me your story?

Student: Um Yes. The people were feeling pretty scared when they were seeing the water.

Teacher: What's happening in your story?

Student: The kids, the kids got lost. And they were pretty worried so they swam out find the kids and there was snow falling and then the snow melted and there was logs all over.

Teacher: What did they do to prepare for the big weather?

Student: They were trying, they wanted to sailed to try and find their kids through the big weather before there was a big storm.

Teacher: Is there anything else you want to tell me about your story?

Student: The trees fell down and there was lots of wood all over. Everyone went looking for the kids because the kids were in a big group so everyone was looking for them before the big storm. And also they were looking so they could have a good time.

Next time, I would break it down into more lessons – the students were engaged in building their stories and could have used more time to expand on them. I would leave the stories built and add to them another time (i.e. – build your setting today, character development and events in the story (weather preparation) the following day, then resolution on the last day).

We will run this lesson a few times so kids can build stories with different big weathers - this will extend their learning and help them develop their process and oral story skills. I will have our big buddy class (grade 7s) come and support our learning - they could build a story together and buddies could support students in extending their learning.

We set up a large group storyboard to explore and extend the learning during free play and left all the backdrop photos accessible for students to use during this time. We continued our discussion on weather prediction, how to prepare, that big weather doesn't last forever etc. – this helps students process any feelings or worry around big weather.

Extending the learning into community helpers would be a follow up lesson.

Kindergarten: Nature Journaling Scavenger Hunt - Connecting to the land and making observations of our local ecosystems

This lesson was piloted in a French Immersion classroom.

Learning Opportunity	Students create a scavenger hunt to practice nature journaling, observational skills, and drawing. Using all 5 senses, they explore the outdoors and solidify their learning through art and group discussion.	
Climate Change Connections	• A foundation of care for the outdoors, helping students develop a connection with the land and place that builds motivation for climate action	
Strategies and pedagogical approaches	 Teach about climate change across learning areas Make climate change education personally and locally relevant Ground students in place-based learning Keep learning experiential, embodied, and playful	• Play-based • Place-based • Inquiry-based
Curricular Competencies and Content	Art	• Express feelings, ideas, stories, observations, and experiences through the arts
	English Language Arts	• Use language to identify, create, and share ideas, feelings, opinions, and preferences • The relationship between reading, writing, and oral language
	Physical and Health Education	• Identify and describe feelings and worries
	Science	• Demonstrate curiosity and a sense of wonder about the world • Observe objects and events in familiar context • Make exploratory observations using their senses • Experience and interpret the local environment
Core Competencies	Communication	• Communicating: Connecting and engaging with others (and the land), Acquiring and presenting information
	Thinking	• Critical and Reflective Thinking: Analyzing and critiquing, Questioning and investigating, Reflecting and assessing • Creative Thinking: Creating and innovating, Generating and incubating
	Personal and Social	• Personal Awareness and Responsibility: Self-regulating • Positive Personal and Cultural Identity: Understanding relationships and cultural contexts • Social Awareness and Responsibility: Contributing to community and caring for the environment
First Peoples Principles of Learning	• Learning is holistic, reflexive, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place) • Learning involves recognizing the consequences of one's actions • Learning requires patience and time	

Previous Knowledge

- Lessons on shading and light, colour, and/or the 5 senses
- Lessons on recording observations

Process

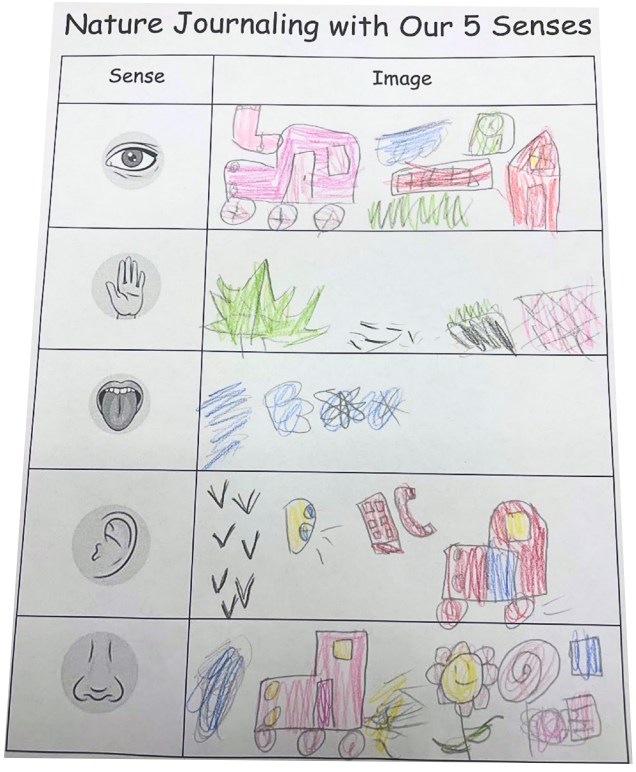
1. Read a book of choice to set the stage. See "Suggested Resources" on page 70.
2. Include students in the set-up of a scavenger hunt, having them identify up to four things that they want to find (for example, something round, a sound they enjoy or an insect).
3. Invite students to reflect in journals on what they will be looking for. This is an opportunity to review the 5 senses and how we use them when noticing the world around us.
    - Consider creating a nature journaling sheet or chart if students need some guidance to organize their observations.
4. Have students complete their scavenger hunt, drawing and/or writing about what they find and observe (this takes time and may be done over more than one day).
5. Invite students to share what they found with a partner or the group. Prompts for a reflective discussion:
    - I notice…I wonder…It reminds me of…
    - How might this scavenger hunt be different in a different season?
    - Compare/contrast students' findings
6. Complete this activity again in different seasons. Invite students reflect on the differences they note, using the 5 senses to guide their observations.
7. Possible adaptations/variations: Group students and have them complete scavenger hunt together, partner students up with a buddy class to explore together, complete one scavenger hunt as a class and have students record their observations

Nature Journaling

- Teaches participants how to observe, become aware of all their senses, and exercise imagination, as well as to exercise critical thinking.
- Promotes observation and learning, helps build scientific thinking skills, connects us to nature, fosters mindfulness and builds community.

Optional resource

How to Teach Nature Journaling by John Muir Laws and Emilie Lygren; Forward by Amy Tan
Thirty- one hands-on field activities connect art, science, math, and critical thinking, while encouraging students and mentors alike to recognize and record the wonder and beauty in the natural world.



Assessments

Highlight or check off elements that you see in a student's nature journal. There should not be an expectation that they complete everything on this rubric.

Name:	**Date:**	
Location:	**Project:**	
Metadata: Date Weather Feelings	**Sketch/Description** Drawing & Diagram Notes & Description Detail	**Label** Colour Identify Object Habitat Sketch
Measurement: Size Magnification	**Other:** Connection Questions	

Kindergarten Rubric

There is no need to assess each outcome. Instead, choose a few depending on the focus of the scavenger hunt/nature journal and assess those.

	Emerging Works with ongoing teacher support	**Developing** Works with some teacher support	**Proficient** Works independently	**Extending** Works independently and can support the learning of others
Participating in relaxing activities (PHE)				
Identify properties of familiar materials in nature (Science)				
Notice changes in weather and/or seasons (Science)				
Identify natural and human-built characteristics of the local physical environment				
Curiosity and wonder lead us to new discoveries about ourselves and the world around us (Language Arts)				
Stories and other texts can be shared through pictures and words (Language Arts)				
Uses elements of design: line, shape, texture, colour; principles of design: pattern, repetition (Arts)				
Practices physical and emotional safety of self and others when engaging in the arts; being considerate of the environment and materials (Arts)				

Student Self-Evaluation

	Not Yet	I'm Learning	Yes
Social Awareness and Responsibility: I can be aware of others and my surroundings			
Personal Awareness and Responsibility: I can sometimes recognize my emotions			
Positive Personal and Cultural Identity: I can identify people, places, and things that are important to me			
Critical Thinking and Reflective Thinking: I can explore and use my senses to gather information			
Creative Thinking: I get ideas when I play			
Communication: In a safe and supportive environment, I respond meaningfully to communication from peers and adults			
Collaboration: In familiar situations, I can participate with others			

Nature journaling helps students build their observational skills and fosters mindfulness.

Teacher Reflections and Sample Student Work

Teacher 1 (French Immersion)

One of the biggest things I've noticed since starting nature journaling is that my students are more aware of their surroundings. They are slowing down and noticing more in the forest while they play (even when we are specifically tasked with a journal entry). They move mindfully through the space when we are journaling, taking care and making acute observations.

Four was too many items to search for independently. My group would have benefitted from more scaffolding (i.e. doing one scavenger hunt all together and each drawing the same items in their journals) or doing it with big buddies (grade 7) a couple of times until they got the hang of it.

The weather can be challenging some of the time, but we made observations and brought some nature inside that we wanted to record when it was pouring rain, returning the items back to the forest when we were done. Nature journaling really allowed the students to connect with the land on a different level.

Teacher 2

My students were very engaged and shared how much they enjoyed journaling while outdoors. Many asked if we could do the same lesson next week in a different sit spot or at the park across the street from our school. I was amazed that my students were able to make connections to our previous climate lessons. Many of my students observed and documented emissions from cars in the sight and smell sense boxes.

Students enjoyed sharing their learning with their peers. I had my students share their learning by doing a sharing circle once we were back in our classroom.

I was surprised how quickly my students were able to transfer their prior knowledge from earlier in the year when we learned about our five senses to an outdoor learning setting. While we were outdoors there were several distractions, but I was surprised at how focused and on task my class was throughout the lesson. There is something about learning outdoors that calms students and helps them zone in on learning.

Kindergarten – Grade 1: Where does food come from?

Parts of this lesson were originally written in French and piloted in a Francophone classroom.

Learning Opportunity	Students go on a field trip, read books, do sorting activities, and reflect through art to learn about where their food comes from and identify how food choices impact their community and environment.	
Climate Change Connections	• Understanding where food comes from, what it needs to grow/be produced and how it gets to us • Understanding the relationship between our community and the environment • Understanding the impact food has on the environment and climate	
Strategies and pedagogical approaches	 Teach about climate change across learning areas  Encourage action and foster hope  Make climate change education personally and locally relevant  Recognize the role of Indigenous knowledge and ways of learning  Ground students in place-based learning  Keep learning experiential, embodied, and playful	• Place-Based • Inquiry-Based
Curricular Competencies and Content	**Career**	• K/1: Identify and appreciate the roles and responsibilities of people in their schools, families, and communities
	Physical and Health Education	• K/1: Identify and explore a variety of foods and describe how they contribute to health
	Science	• K: Ask simple questions about familiar objects and events • K/1: Experience and interpret the local environment • 1: Sort and classify data and information using drawings, pictographs and provided tables • 1: Local First Peoples knowledge of the local landscape, plants and animals
	Social Studies	• K/1: Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • K/1: Explain the significance of personal or local events, objects, people, or places • K: People, places, and events in the local community, and in local First Peoples communities • 1: Characteristics of the local community that provide organization and meet the needs of the community • 1: Relationships between a community and its environment
Core Competencies	**Communication**	• Communicating: Connecting and engaging with others
	Thinking	• Critical and Reflective Thinking: Analyzing and critiquing
	Personal and Social	• Positive Personal and Cultural Identity: Recognizing personal values and choices • Social Awareness and Responsibility: Building relationships, Contributing to community and caring for the environment, Resolving problems
First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning is holistic, reflective, reflective, experiential, and relational (it emphasizes a sense of connection, reciprocal relationships, a sense of belonging, and a connection to the land) • Learning involves recognizing the consequences of one's actions • Learning recognizes the role of Indigenous knowledge	

Preparation

Previous Knowledge

The students should know about food groups and healthy food choices and have a basic understanding of plant lifecycles and needs.

Lesson Preparation

- This lesson involves an optional visit to a market / supermarket. If taking this field trip, you will need to clear your visit in advance and, if possible, arrange for a staff member to be available to give a talk.
- Create several sets of cards of different types of food.

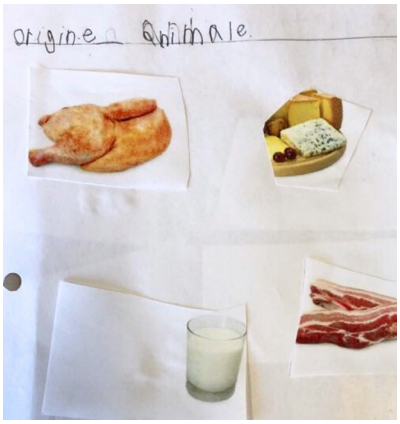
Process

1. Where does food come from?

- For this activity, you may use students' lunches, images of sample lunches, or food items that you brought into class.
- Have a class discussion. Discussion questions could include: Where did the food come from? Where did it come from before the store? What is it made of? Do you find pizza, bread or pasta in the wild? What types of food can be grown or produced nearby? What foods are indigenous to this land?
- To dive deeper into the climate impacts of food: What are the benefits of growing your own food or buying food from a nearby farm? If food comes from far away, how does it travel here? What are the impacts of transporting food for humans, the earth, animals, plants and oceans? What are the benefits of indigenous foods (often use less water, part of local ecosystem)? Indigenous foods are defined as foods that are Indigenous to where they are sourced and utilized pre-contact.
  - » Support your discussion with "Suggested Resources" on page 70.
- Sort food or images of food by origin (for example: animal vs. plant, local vs. non-local, indigenous vs. introduced).

2. Seasonal Food:

- Create a class list of fruits and vegetables and discuss when and how they are grown.
  - » Possible prompts: What season does each fruit/vegetable grow in? Where do the fruits and vegetables that are not in season come from? How does the food get here when not in season? What are the impacts of growing food out of season (such as transportation impacts or energy impacts of greenhouses)?
- Sort images of food by the season they can be grown in B.C.



3. Local Food Field Trip:

- Visit a market, supermarket, farm or garden to learn about local foods. You may create a snack with local food for the class or have students share what local foods they've eaten before or like to eat.
  - » Consider observing the emissions from vehicles during your field trip to highlight how emissions impact our health and the planet.

- Alternatively, visit a river / forest / local plant garden to observe foods that are indigenous to your community or learn from a local First Nation about their traditional food sources.

4. Class Book:
   - Create a class book about how eating local food helps people and the planet and how the students might access local food.

Assessments

Sample Summative Assessment

How will students demonstrate understanding of the curricular connections? How will the assessment criteria be communicated to or created with students?

Class book proficiency scale

Extending: student was able to independently generate an idea about how they can eat local, student was able to independent draw a detailed image that supported their idea. Student was able to independently write letter sounds and/or words that relate to their idea.

Proficient: student was able to generate an idea about how they can eat local, student was able to independently draw an image that supported their idea. Student was beginning to write letter sounds or simple words that relate to their idea.

Developing: student required some support in generating their idea on how they can eat local, student was able to draw a simple picture.

Emerging: student required direct support in being able to generate their idea on how they can eat local and required support with their picture.

Teacher Reflections and Sample Student Work

This lesson went really well broken down into a couple of days. The students were really invested in the tasks as they were very personalized.

It was interesting to see them make connections between healthy eating and food location. The students are excited to start planning our school gardens and many of them made great connections to foods they grow at home. It helps that I work in a rural area and many students live on farms.

This student talked about how her family visits local farms in the summer and fall to harvest fruit. She talked about how she was looking forward to going berry picking in the summer and apple picking in the fall. This student would be proficient for this activity.

I can eat local by...

Student: This is me with all the things I want to grow in our school garden. Watermelon is my favourite and I like blueberries, cucumber, grapes, carrots, oranges, apples. I want to put flowers in the garden too. I'm so excited to grow the food to eat food from our garden.

I was surprised by how many students hadn't visited our local produce market that is just one block away from the school.

My students enjoyed sharing their learning by creating a class book! We then had the chance to present this class book to our entire school on our school's morning news show.

This student shared that her family was already talking about growing their own vegetables on their patio. She shared that she wanted to help our planet by helping her family grow vegetables in the summer. This student would be proficient for this activity.

The discussions, especially on the second part of the lesson, were interesting. It is clear that this was the first time that the students had addressed this topic.

Most quickly understood the concept of plant and animal origin. Repeating the information several times in different ways allowed for good memorization.

Few students were able to express for themselves why buying vegetables from far away or grown in greenhouses could be problematic for the environment. It was also difficult for the students to classify the fruits according to the season in which we can eat them. We looked together at a table that shows what is consumable in BC in each season, but it is a complicated table for children of this age.

Kindergarten – Grade 1: Planet Friendly Ways of Getting to School

Learning Opportunity	Students engage literacy and numeracy skills to learn about the relationship between transportation, GHG emissions and climate change.	
Climate Connections	• Understand the relationship between our community and the environment by linking transportation choices to pollution and climate change	
Strategies and pedagogical approaches	 Teach about climate chnage across learning areas Encourage action and foster hope Make climate change education personally and locally relevant Ground students in place-based learning	• Place-Based • Inquiry-Based
Curricular Competencies and Content	English Language Arts	• Use personal experience and knowledge to connect to stories and other texts to make meaning • Oral language strategies - making personal connections, taking turns, making relevant contributions to discussion
	Math	• Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
	Physical and Health Education	• Identify opportunities to be physically active at school, at home, and in the community
	Social Studies	• Recognize causes and consequences of events, decisions, or developments in their lives • Relationships between a community and its environment • Roles, rights, and responsibilities in the local community
Core Competencies	Communication	• Communicating: Focusing on intent and purpose, Acquiring and presenting information
	Thinking	• Creative Thinking: Evaluating and developing
	Personal and Social	• Social Awareness and Responsibility: Contributing to community and caring for the environment.
First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning is holistic, reflexive, reflective, experiential, and relational (focused on connected-ness, on reciprocal relationships, and a sense of place) • Learning involves recognizing the consequences of one's actions	

Process

1. Have students share how they got to school - create a class chart and discuss.
    - Possible discussion questions: What are the most common ways that students get to school? What modes of transportation do they like the most?
2. Take students on a class walk to observe emissions/pollution coming from cars. Note that emissions may be odourless and colourless.
    - Possible discussion questions: What are they seeing/experiencing? What types of transportation don't cause pollution or cause less pollution? What impacts does pollution have on us and our planet?
    - This is an opportunity to connect ideas of pollution to climate change.
3. Have students journal and draw about how they get to school and what planet friendly ways there are to get to school and/or other places they visit often.
4. Consider having a guest speaker who owns an electric car or commutes by bike.
    - Possible discussion: Do electric vehicles/bikes cause emissions? What do they like about travelling by electric car/bike?
5. Consider doing a class Green Ways of Getting to School Challenge.
    - Track how students get to school for two weeks and see if they can increase the number of planet-friendly trips to school. Some students can not change how they get to school, so consider tracking other trips depending on your class and community (for example walking or carpooling to play dates or sports).
    - Participate in Go By Bike Week and access their Resources for Schools to support your class challenge.

Optional resources

- Sustainable Transport video
- 'It's Good to be Green: Let's Walk to School' by Deborah Chancellor

Assessments

Formative assessment strategies

Graphing question: Have students show each number on their fingers (for example: How many students walked to school? Let's count all together), print the number on small white boards, point to the number on a number line, use counters or manipulatives to show 1 to 1 correspondence, etc.

Class book: Check in with students as they are drawing and recording their ideas to see if they understand what planet friendly ways are when getting to school.

Whole class check in: After the lesson (either the same day or another day) have students share their learning by asking students "What are some plant friendly ways we can get to school? Why are these ways planet friendly?"

Whole class self-assessment: Have students close their eyes and show a thumbs up, thumbs middle, or thumbs down to reflect on their learning and to give a sense of where they think they are at.

Teacher Reflection and Sample Student Work

This lesson went very well! My students really enjoyed going on a class walk to see what emissions look like and I felt that this was crucial to their understanding. As a tip, search for emissions on a colder day as they are much easier to see when it's colder.

My students really enjoyed the story "Good to Be Green: Let's Walk to School" and they were interested in the video as well. I paused the video a few times to encourage discussion and to provide an opportunity for students to make connections and ultimately increase their understanding. We also had a special guest who is the owner of an EV. My students were very engaged and eager to learn about the differences between a gas-powered car versus an electric.

This student shared that they usually drive to school. They mentioned they wanted to talk to their family and tell them that we need to try to walk to school or "make it fun by riding my scooter". They talked about how walking to school or riding their scooter would help make their muscles and body strong.

They were able to understand and respond to these questions independently. On the proficiency scale, this student would be proficient for this activity.

On whole class self-assessment: After this lesson I asked my students to close their eyes and I asked them "Do you feel that you can name some planet friendly ways to get to school?" I told them to show me thumbs up if they really understand, thumbs middle if they are beginning to understand and thumbs down if they are needing help with this.

Kindergarten – Grade 1: Zero Waste Lunchbox

This lesson was originally written in French and piloted in a Francophone classroom.

Learning Opportunity	Students explore ideas of waste through an examination of their lunches and engage in a challenge to reduce waste based on what they've learned.	
Climate Connections	• Waste reduction and the impact of packaging	
Strategies and pedagogical approaches	 Teach about climate change across learning areas Encourage action and foster hope Make climate change education personally and locally relevant Keep learning experiential, embodied, and playful	• Inquiry-Based
Curricular Competencies and Content	Science	• K: Ask simple questions about familiar objects and events • K/1: Experience and interpret the local environment • K/1: Generate and introduce new or refined ideas when problem solving • 1: Consider some environmental consequences of their actions • 1: Classification of living and non-living things
	Social Studies	• K/1: Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • K/1: Recognize causes and consequences of events, decisions, or developments in their lives • 1: Relationships between a community and its environment • 1: Roles, rights, and responsibilities in the local community
Core Competencies	Communication	• Communicating: Connecting and engaging with others
	Thinking	• Critical and Reflective Thinking: Analyzing and critiquing
	Personal and Social	• Social Awareness and Responsibility: Building relationships, Contributing to community and caring for the environment
First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning is holistic, reflexive, reflective, experiential, and relational • Learning involves an awareness of the consequences of one's actions	

Previous Knowledge

Previous lesson on waste sorting – what bins are in your classroom and what goes in which bin?

Process

1. Invite students to explore their lunchboxes, either observing what they are going to eat or drawing a picture of what they ate earlier. Alternatively, the teacher can use pictures of a sample lunchbox, objects from a classroom kitchen, or a cafeteria menu for this activity.
    - Have a class discussion about what makes up the meal.
        - » Example discussion prompts: To which food group does this food belong? Do you like this food or not? What colours do you see on the food, containers, and packaging? What sort of packaging is this food in?

- Sort the food, packaging, lunch boxes, and reusable containers (or pictures/objects/menu items) into the following groups:
  - Zero waste/reusable
  - Compostable
  - Recyclable
  - Landfill
- Class discussion about waste
  - Example discussion/in-class research topics : How does waste impact the environment (for example: pollution of habitats, oceans, and groundwater, animals consuming waste)? How long do different types of waste take to decompose/break down? Brainstorm opportunities to reduce waste at lunch.

2. Consider having students create posters or other presentations to share their learnings
3. Optional: Have students do a waste reduction lunchbox challenge, where they measure their waste (weigh or measure the height of the trash) and work to reduce it over time.

Teacher Reflections and Sample Student Work

The lesson went very well. It was interesting to see the different lunchboxes and have each student explain how their lunchbox helped with the disposal of certain waste, if only by using a water bottle rather than plastic bottles. The kids were very receptive and really trying to find solutions, which covered the Science, Social Studies, and Applied Design, Skills, and Technologies curriculum.

Some already had lunch boxes close to zero waste, which was fantastic to illustrate.

I highlighted in each lunchbox which items did not produce waste and ensured there were no judgments. It is important to pay attention to make sure the children never feel bad. I didn't have any problems in my class, but we have a very good classroom environment. The children also did not comment or pass judgement on each other's lunch boxes. My questions were directed in such a way as not to make any judgments but rather to state facts. If you don't think your classroom environment is conducive to this, then it would be better to use example lunchboxes..

This poster illustrates the problem of waste and in particular the waste that ends up in rivers and oceans. This student was really touched by the fact that the animals were not happy and that it was dangerous for them

Here, the poster illustrates the objects that are usually found in our recycling bin, but also why recycling can be a good alternative to the garbage by showing what happens to the objects once recycled.

Grade 2: Toys Toys Toys

Learning Opportunity	Students will learn about waste, and reuse through an examination of how their toys are made and time spent outside identifying toys found in nature. Students will begin to learn about the environmental impact of their toys and other items.	
Climate Connections	• Beginning to understand the concept of consumption and over-consumption and how that impacts the planet • Different materials have different environmental impacts	
Strategies and pedagogical approaches	 1 Teach about climate change across learning areas 3 Make climate change education personally and locally relevant 4 Recognize the role of Indigenous knowledge and ways of learning 5 Ground students in place-based learning 6 Keep learning experiential, embodied, and playful	• Play-Based • Place-Based • Inquiry-Based
Curricular Competencies and Content	English Language Arts	• Engage actively as listeners, viewers and readers • Use personal experience and knowledge to connect to stories and other texts to make meaning • Reading strategies (using illustrations and prior knowledge to predict meaning, retelling in own words, locating the main idea and details) • Oral language strategies (asking questions to clarify, expressing opinions)
	Mathematics	• Use reasoning to explore and make connections • Model mathematics in contextualized experiences • Pictorial representation of concrete graphs, using one-to-one correspondence
	Science	• Observe objects and events in familiar contexts • Ask questions about familiar objects and events • Make simple prediction about familiar objects and events • Sort and classify data and information using drawings, pictographs and provided tables • Physical ways of changing materials • Chemical ways of changing materials
Core Competencies	Thinking	• Critical and Reflective Thinking: Analyzing and critiquing, Questioning and investigating • Creating Thinking: Generating and incubating
	Communication	• Communicating: Acquiring and presenting information
First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning is holistic, reflexive, reflective, experiential and relational (focused on connectedness, on reciprocal relationships, and a sense of place) • Learning is embedded in memory, history, and story	

Process

1. Read 'Too Many Toys' by David Shannon (Video version) and discuss.
    - About the book: Spencer has too many toys! His father trips over them, his mother falls over them, and the house is overflowing with junk. Now its time to give some of the mountain of goodies away, but Spencer finds it hard. In the end, he fills a box, but decides the one toy he can't part with is the box!
    - Example discussion questions: What could Spencer do with the toys? Do you have too many toys? Could you give up some of your toys? Where would you take your toys?
2. Go for a walk outside and give time for free exploration/play. Have students identify 'nature toys' that they played with or that could be used as a toy. Take photos of the items, these will be used in Part 4.
    - This is an opportunity to explore ideas around waste, reuse, and responsibility to the environment.
    - Before leaving, remind the students to return nature's 'toys.'
3. Make a list of toys in the classroom and create a class bar graph of students' favourite toys.
    - Discuss what the toys are made of and record the class answers.
4. Record the materials used to make both the nature toys in part 2 and the top toys from the graph in part 3. Compare the materials and discuss the differences as a class.
    - Example discussion questions: How are nature toys made? What happens to the classroom toys over time? What happens to nature toys over time? What happens to broken toys in the classroom? In nature? Where did these materials and toys come from? Were they made in a factory? How did they get from there to here?
5. Have student groups each choose a toy from the classroom and record details including size, shape, colour, materials and texture and then share with the class.
    - Example discussion questions: How was this toy created? If I wanted to make this toy, what would I need? What resources are used to make this toy (for example: oil for plastic, wool from a sheep or a river for electricity)?
    - Consider watching the Lego Bricks in the Making for more information on how toys are made.

Optional Next Steps

- Create lifecycle diagrams of the different kinds of toys (human made & found)
- Host a toy swap
- Take a field trip to a local thrift store, recycling facility, or garbage dump

Assessments

Example assessment opportunities

- As students respond to class discussions and ideas are recorded
- Record conversations/pictures/videos/writing in nature
- Assess diagrams created and labelled by the children

Core Competency Student Self-reflections

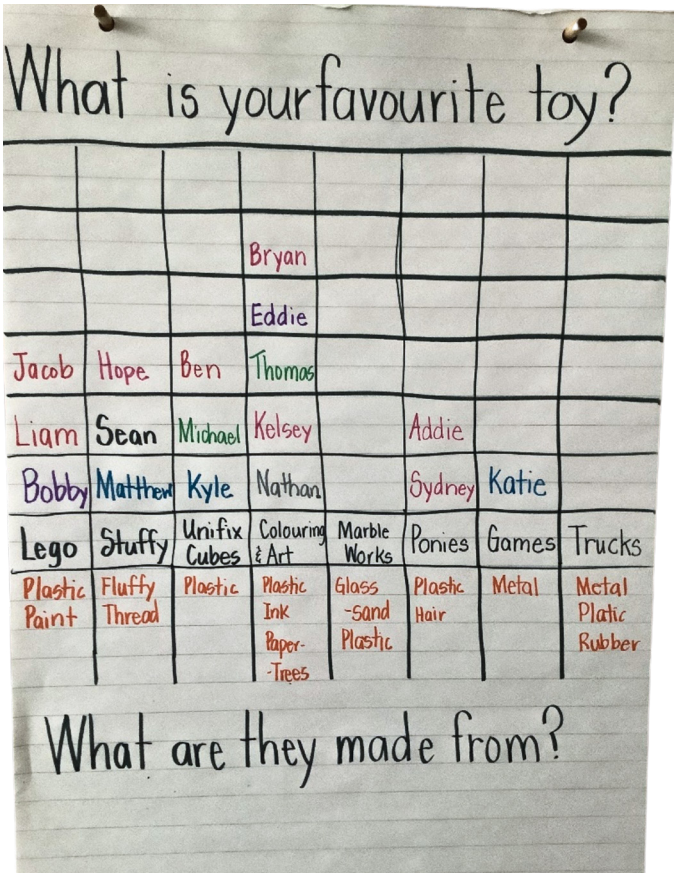
	How I showed this
Critical Thinking I can ask questions and make predictions.	
Communicating I can understand and share basic information about topics that are interesting to me.	
Creative Thinking I can use my imagination to get new ideas and/or build on other people's ideas to create new things.	

Teacher Reflections and Sample Student Work

The children loved the story and could relate to many events, especially stepping on Legos!

It happened to be a really nice day and the time was perfect for a forest walk, so we headed into the forest. As we approached the trail we talked about the story, the land and first peoples (Tla'amin Nation). It was easy for the children to identify 'nature's toys' as we wove our way through the trail to our outdoor classrooms. What surprised me was how easily the children imagined a stick as a person, a fir cone as a ball, a stump as a castle, a twig as a fishing rod.

We talked about how a graph shows how many people like something and how it is unlike a vote where there is a winner/loser. Each student shared a description of the materials the toy is made from with the person beside them. Children confirmed the materials the toys were made of and shared their knowledge of glass being made from sand, paper was made from trees. They also talked about the Monster trucks all being broken (a good discussion to come about broken toys and what happens to them).



Class graph of students' favourite toys and the materials they are made from.

Students discovering nature toys.

Grade 3: Climate Change - Small Steps to Collective Action

Learning Opportunity	Students use skits, games, and videos to learn about climate change and explore ideas of collective and personal climate action through discussion, written activities, and reflective journaling to empower a solutions-focused mindset.	
Climate Connections	• Students understand the difference between weather and climate and that the climate is changing due to human activities • Students understand that humans can bring about solutions to climate change and begin to identify those solutions	
Strategies and pedagogical approaches	 Encourage action and foster hope Make climate change education personally and locally relevant Keep learning experiential, embodied, and playful	• Play-Based • Inquiry-Based
Curricular Competencies and Content	Career Education	• Work respectfully and constructively with others to achieve common goals • Identify and appreciate the roles and responsibilities of people in their schools, families, and communities • Goal-setting strategies: Identify steps required to help achieve short-term goals • Roles and responsibilities at home, at school, and in the local community
	Science	• Identify some simple environmental implications of their and others' actions • Contribute to care for self, others, school, and neighbourhood through personal or collaborative approaches • The knowledge of local First Peoples of ecosystems
	Social Studies	• Relationships between humans and their environment
Core Competencies	Communication	• Collaboration: Supporting group interactions
	Thinking	• Creative Thinking: Creating and innovating
	Personal and Social	• Social Awareness and Responsibility: Building relationships, Contributing to community and caring for the environment • Positive Personal and Cultural Identity: Recognizing personal values and choices, Identifying personal strengths and abilities
First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning involves recognizing the consequences of one's actions. • Learning involves generational roles and responsibilities.	

Process

1. Weather versus Climate

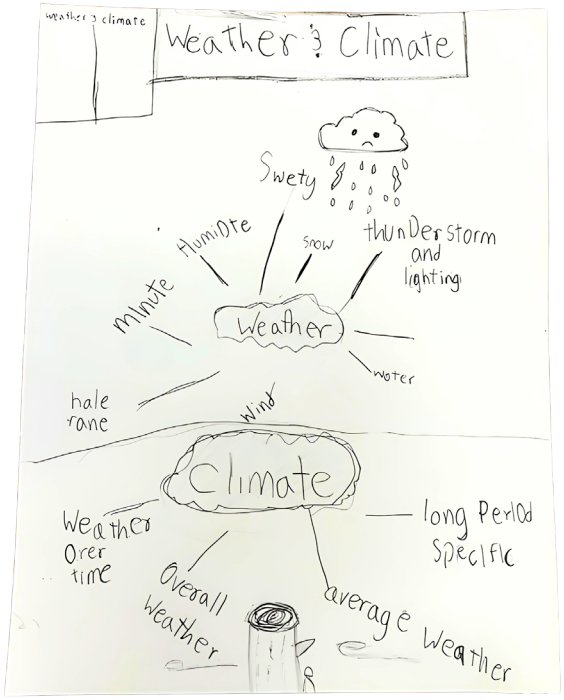
- Discuss this quote from British geographer Andrew John Herbertson: "Climate is what on average we may expect. Weather is what we actually get."
- Have students create mind maps on weather vs. climate.
- Discussion question: What are examples of weather becoming more intense and uncomfortable? Examples include long periods without rain (droughts), prolonged heat (heat wave, dome).
- Optional resources:
  - Crash Course Kids: Weather vs. Climate
  - The Difference Between Weather vs. Climate
- Have students write and perform extreme weather skits:
  - Guiding questions: How does extreme weather affect your day/life/activities? If weather becomes more intense, how would that affect you and your friends and family?

2. What is Climate Change?

- Discuss: What is climate change? What causes climate change?
- Optional resources:
  - Climate Change Explained in 5 minutes
  - Climate Change: Crash Course for Kids'
- Brainstorm climate solutions and ways we can help.
- Play 'Ways to Protect the Planet' from Earth Rangers.

3. Climate Action

- Review the Global Goals on sustainable development, highlighting goal 13, 'Climate Action.'
- Discuss what collective action means. Can students think of examples?
- Class discussion on circles of influence:
  - What impact can 100 children have if they all work on one project? What is one improvement for the Earth you want everyone to focus on?



Weather versus Climate Mind Map from Part 1

- Have students complete a circle of influence organizer (see template), thinking about who is in their sphere of influence and how they can work together to create collective action.
- Optional resource:
  - Pages 4 and 5 of 'Think Big! Collective Action for Climate Change'

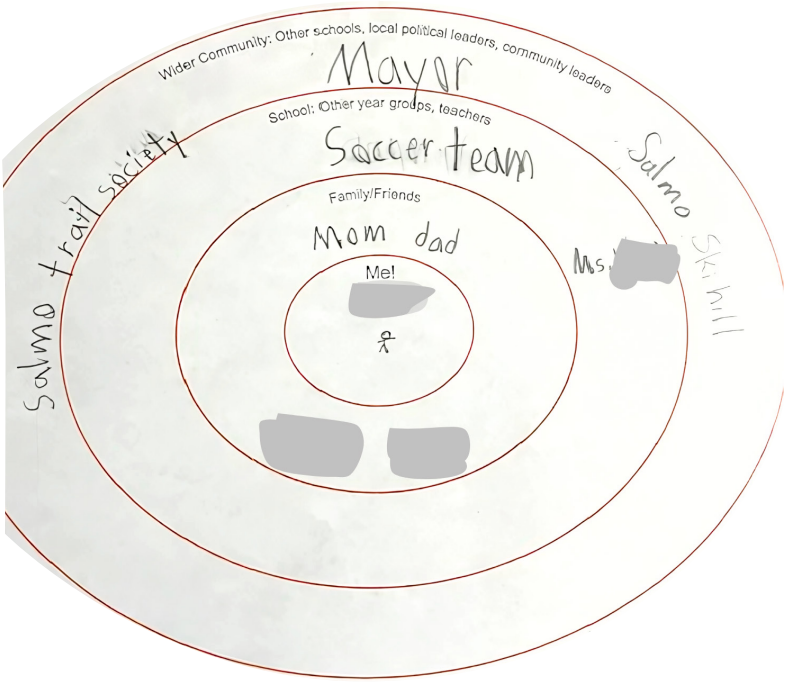
4. Self-Reflection

- Review the actions from the Earth Rangers game and the actions that students brainstormed in Part 2 with the class. Discuss what they think might have the biggest impact on climate change
- Have students choose an action that they might like to do personally and journal about their choice. Discuss how these actions might influence people in their circles of influence.
- Possible prompts:
  - One way to help the environment that is important to me is…
  - Something I will do at home is…
  - I will also encourage my family to…
  - At school, I can also…
  - I can make an influence in my community by…

Teacher Reflections and Sample Student Work

The students had previously been studying Indigenous creation stories and discussed how living beings interact with one another in reciprocity, so they had pretty good background knowledge. The students had not had much practice with reading charts and graphs so the data for climate and weather was challenging.

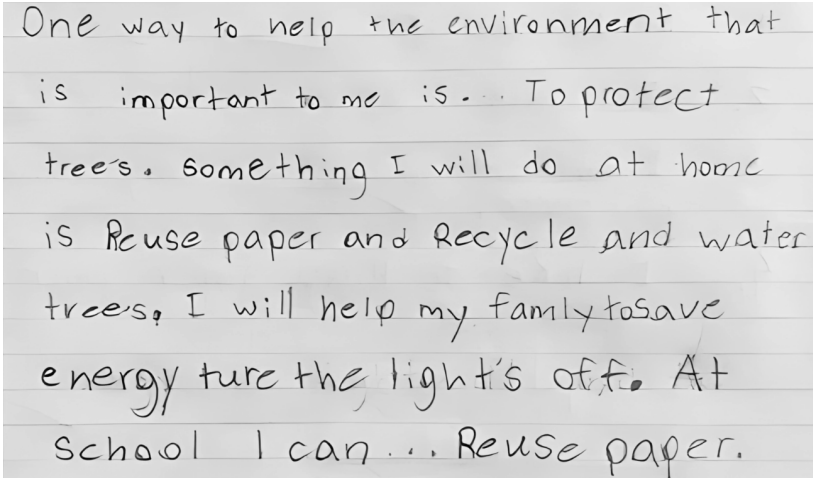
The examples of large-scale climate actions were way over their heads and that's why I scaled back and kept the actions local and realistic for them. The next day however, a few kids returned to school with examples of youtubers who are big change-makers in the environmental world (influencers). I learned a lot.



Completed circle of influence graphic organizer

The students were keen to discuss all the ways we can help the earth and make necessary changes. The discussion was rich, and many hands were up awaiting their turn to share.

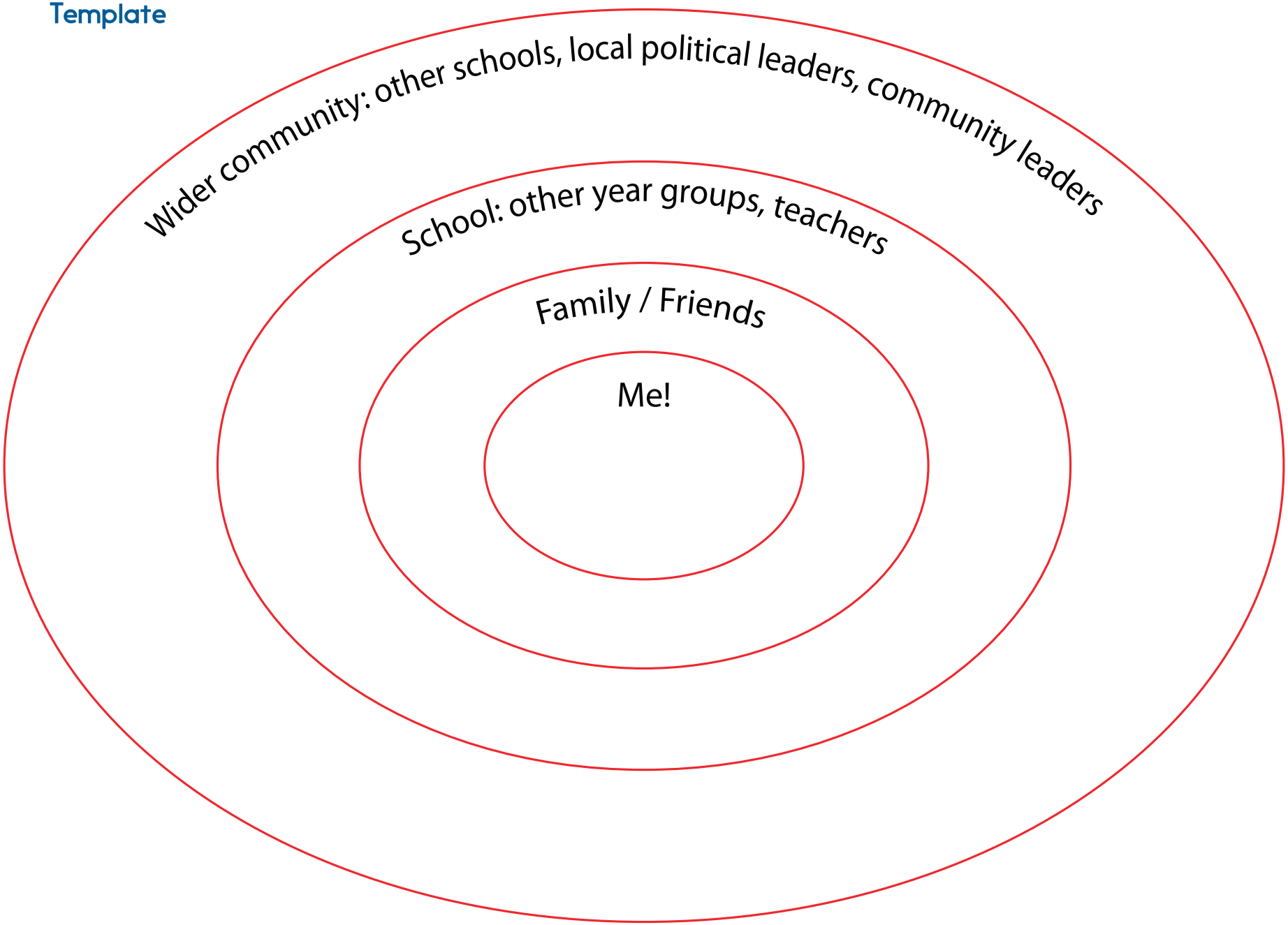
I think the students were able to see the roles and responsibilities they have at home, at school, and in the local community, as well as the shared responsibility to care for the local environment (stewardship). They gained some awareness of some simple environmental implications of their and others' actions and know how to contribute to caring for nature through personal and collaborative approaches. However, it was difficult for the kids to understand how humanity may be causing climate change without understanding the ways in which we use energy and resources.


One way to help the environment that is important to me is... To protect trees. Something I will do at home is Reuse paper and Recycle and water trees. I will help my family to save energy ture the lights off. At school I can... Reuse paper.

A student reflects on what they can do to impact the earth and address climate change.

All four videos were super helpful in explaining many aspects of weather, climate and climate action and the Earth Rangers game (I used the instructions exactly) was a big hit. The "spheres of influence" activity was really fun for them - they couldn't believe that something they do could affect change in a bigger way! I taught them the saying: "If you think you are too small to make a difference, try spending the night in a tent with a mosquito". They thought that was hilarious.

Circles of Influence Template



Grade 3: Our Carbon Footprint

This lesson was originally written in French and piloted in a Francophone classroom.

Learning Opportunity		Students explore their 'carbon footprint' and how to be a responsible planetary citizen, while learning about larger scale climate agreements and where GHG emissions come from.
Climate Connections		• Roots of climate change, greenhouse effect • Individual and collaborative climate solutions • Carbon impact of plastic
Strategies and pedagogical approaches		 Teach about climate across learning areas Encourage action and foster hope Make climate change education personally and locally relevant • Inquiry-Based
Curricular Competencies and Content	Arts	• Create artistic works collaboratively and as an individual, using ideas inspired by imagination, inquiry, experimentation, and purposeful play
	English Language Arts	• Exchange ideas and perspectives to build shared understanding • Communicate using sentences and most conventions of Canadian spelling, grammar, and punctuation
	Math	• Connect mathematical concepts to each other and to other areas and personal interests • Pattern rules using words and numbers, based on concrete experiences
	Science	• Demonstrate curiosity about the natural world • Identify some simple environmental implications of their and others' actions
	Social Studies	• Make value judgments about events, decisions, or actions, and suggest lessons that can be learned • Relationship between humans and their environment
Core Competencies	Thinking	• Critical and reflective thinking: Analyzing and critiquing, questioning and investigating
First Peoples Principles of Learning		• Learning ultimately supports the well-being of the individual, family, community, land, spirits, and ancestors

Previous Knowledge

- Students understand the term 'carbon footprint' (Britannica definition)

Process

1. Air Pollution and Greenhouse Gases

- Watch a video or read a book on climate change/ the greenhouse effect. See "Suggested Resources" on page 70page 70.
  - » Possible option: Greenhouse gases explained for kids | CBC Kids News
- Have students identify sources of air pollution and greenhouse gases (such as transportation, factories, farms and buildings) and discuss the impact of greenhouse gases on the climate.
  - » Example of age-appropriate framing: Greenhouse gases are like a big coat keeping the earth warm. As we increase the amount of greenhouse gases, we increase the amount of warming, just like putting on another layer of clothing.
- Lead a solutions-focused discussion about combatting climate change.
  - » Possible discussion topics: international climate agreements (such as Kyoto protocol or the Paris agreement), local example of climate solutions (such as compost program or EV chargers in town)

2. Carbon Footprint of Plastics

- Watch What really happens to the plastic you throw away
- Supporting fact: Each kilogram of plastic produced creates between 3-6 kg of Carbon Dioxide.
- Discuss what happens to plastic after it is thrown away.
  - » Possible discussion questions: What are other options for plastic bottles not shown in the video? What bottle has the best life cycle and why? What other options are there to plastic bottles?
- Do a math activity to explore how much carbon dioxide would be produced from different amounts of plastic production (for example, 5 kgs of plastic would produce X kgs CO2).

3. My Carbon Footprint

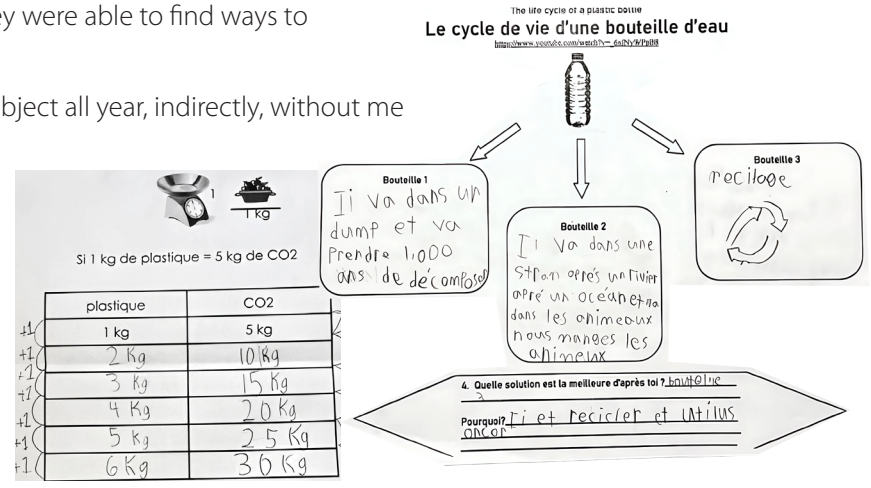
- Hold a class discussion on how we can reduce our carbon footprint.
- Categorize ideas (such as transportation, waste and buildings).
- Choose an option that your students can do or see in the class to discuss deeper (for example: compost, closing windows when the heater/AC is on, turning off lights when they leave the room).
- Invite student to choose one solution that they will act on to be a responsible planetary citizen.

Teacher Reflections and Sample Student Work

I was impressed with their level of understanding of what carbon footprint meant and how easily they were able to find ways to decrease it.

We have been talking about this subject all year, indirectly, without me saying that we were talking about CO2 emissions, climate change, etc.

I thought that with the activity with the video: 'the life cycle of a plastic bottle' children would be saying that using a REUSABLE BOTTLE is the best option- not even one student had that idea!



Grade 3: Connecting with Outdoor Spaces

Learning Opportunity	Students will explore their relationships with outdoor spaces, practice gratitude towards the earth and make plans to care for the land around them. Activities include sit spots, journaling, discussions, and nature art.	
Climate Connections	• Understand the basics of nature stewardship and develop a connection with land and with their local place that builds motivation for climate action • Learn about the importance of biodiversity and the impact of species loss	
Strategies and pedagogical approaches	1 Teach about climate change across learning areas 3 Make climate change education personally and locally relevant 4 Recognize the role of Indigenous knowledge and ways of learning 5 Ground students in place-based learning 6 Keep learning experiential, embodied, and playful	• Place-Based • Inquiry-Based
Curricular Competencies and Content	**Science**	• Make observations about living and non-living things in the local environment • Identify First Peoples perspectives and knowledge as sources of information • Identify some simple environmental implications of their and others' actions • Contribute to care for self, others, school, and neighbourhood through personal or collaborative approaches • Express and reflect on personal or shared experiences of place • Biodiversity in the local environment
	Social Studies	• Recognize the causes and consequences of events, decisions, or developments
	Math	• Increasing and decreasing patterns
Core Competencies	**Personal and Social**	• Social Awareness and Responsibility: Building relationships, Contributing to community and caring for the environment
First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors • Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place) • Learning involves recognizing the consequences of one's actions • Learning recognizes the role of Indigenous knowledge • Learning requires patience and time	

Process

3 1. Guided Reading

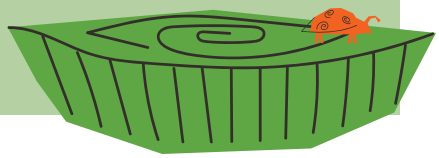
- Read a book about relationships with the earth/land. See "Suggested Resources" on page 70 and consider using local Indigenous stories to learn about your local place.
    - Have students record and reflect with '4 Square Thinking' sheets and then share.
        - » Divide paper into 4 quadrants and label each with any of the following: connections, questions, images, predictions, cool words, something new I learned.
        - » Have students complete 1-2 things in each quadrant as they listen.

2. Sit Spot: The Earth as a Gift

- In a space outside, have students find a sit spot where they will silently observe the space around them for at least 10 seconds (you can adjust the timing to fit your class). Encourage them to pay attention to any sensations or feelings they experience and to be present in the moment.
    - Consider repeating this activity and gradually increasing the observation time over several weeks.
    - Have the students write a journal and/or draw what they see. Some possible discussion questions:
        - How are they feeling? What is their energy after the sit spot? What were they excited to see?
    - Brainstorm gifts from the earth with the class.
    - Have students write in their nature journals again. Prompts may include:
        - Describe what the Land means to you. What gifts do you receive from the Land? What can you gift the Land in return? Gifts can be physical (water, seeds) or actions/gestures (pick up litter, stay on trails/paths, reduce pollution).
    - Finish the sit spot with a sharing circle of class observations.

Sit Spot Tips

- Even sidewalks have insects or plants growing between the concrete - be creative with finding the wild.
- A student who is not able to go outside can look out a window or sit with a plant in the classroom.
- Students who struggle to sit still may do moving sit spots. You can also introduce magnifying glasses or viewfinders to sustain attention.
- Sit spots are developed through experience – it may take time for students to get used to. Consider repeating them at different times of the year to observe changes over time and develop the practice.
- Partnering with a buddy class that is less experienced at a sit spot practice creates leadership and mentorship opportunities.



3. Nature Names: Eco identity

- Define biodiversity (the number and types of plants and animals that exist in a particular area or in the world generally) and discuss why it is important.
    - Discussion question examples: What happens when the needs of animals and plants are not met? What does the term 'endangered' mean? What does it mean for an ecosystem when a species become extinct? What ways can humans help support biodiversity?
    - Make a list of local plant and animal species. Consult local First Peoples to learn about which species are new in your area and/or if any have disappeared over time.
    - Assign or have students choose a nature name from the list (examples: 'Pika', 'Douglas Fir', 'Salal', 'Orca', and so on).
        - Encourage students to learn more about their eco-identity by asking questions and doing research. Consider looking up the names in your local Indigenous language.
        - Possible discussion questions: How does your nature name represent you? What is your story? What teachings do you have for humans? How do you take care of others?

4. Artful Gratitude Creations

- Find a place outdoors and have students gather some natural items around them (such as fallen leaves, seeds, rocks, twigs, and so on). Ensure students do not take parts off living plants or disrupt/damage habitat. This is an opportunity to discuss care, respect and responsibility in nature.

- Encourage students to observe their surroundings and look for patterns in nature. Do they notice any increasing or decreasing patterns?
- Invite students to create an image using what they find around them to represent something they like about the place where they live and learn.
  - » This is an opportunity to introduce ideas of reciprocity. You may also discuss how to take care of this place and of the natural items students are using to create their art.
- Sharing circle - Do a tour of learners' creations and invite students to share. Sharing or Talking Circles are traditional Indigenous formats for discussions. Learn more about their significance and how to incorporate them in the classroom in the FNESC/FNSA: BC First Nation Land, Title, and Governance Teacher Resource Guide (page 19-20) or at First Nations Pedagogy Online.

5. Taking Action (Climate solutions)

- Engage the class in a discussion on how to care for the land. Discussion prompts may include: What can we do to support the health and wellbeing of our local ecosystems for now and for the future? What small changes can help lead to a large change?
  - Make a class list of ideas (examples: create more green spaces, organize a community clean-up, waste-free lunch, etc.). Have student pairs pick an idea, explore it more deeply, and share with the class.
  - Prompts: What would your idea achieve? How many people would you need to do this idea? How much will this idea cost? How will this idea help people, animals or the planet? What are the benefits of this idea? What other impacts/side effects could happen with this idea?
  - Possible final reflection: Have students share one thing they will consider to promote greater respect, connection and care for the outdoor spaces (ecosystems) in their community.

Assessments

	Emerging	Developing	Proficient	Extending
Make observations about living and non-living things in the local environment	Makes somewhat recognizable pictures and words with weak connections to the environment.	Makes recognizable picture and words with strong connections to the environment. Begins to understand the impacts of living and non-living things in the environment.	Makes clear pictures and has writing with strong connections to the environment. Makes connections between living and non-living things and their impacts in the environment.	Demonstrates a clear understanding of the connection between living things and between living and non-living things and their impacts in the environment.
Identify some simple environmental implications of their and others' actions	Can see an action that is harmful for the environment when shown an image.	Names ways their actions can impact their local environment with support.	Independently names ways their actions can impact their local environment.	Names a multitude of actions and systems that can have a positive impact on the environment.
Biodiversity in the local environment	Makes somewhat recognizable pictures and words with weak connections to living things. Can name 1-2 living things in their neighbourhood.	Makes recognizable picture and words with strong connections to living things. Can name 1-2 living things in their neighbourhood and identify 1 of their impacts in the ecosystem.	Makes clear pictures and writing with strong connections to living things. Can name 2-3 living things in their neighborhood and identify multiple of their impacts in the ecosystems .	Demonstrates a clear understanding of the impact of multiple living things in the ecosystem.

Core Competencies Self-Assessment: Personal and Social – Social Awareness and Responsibility

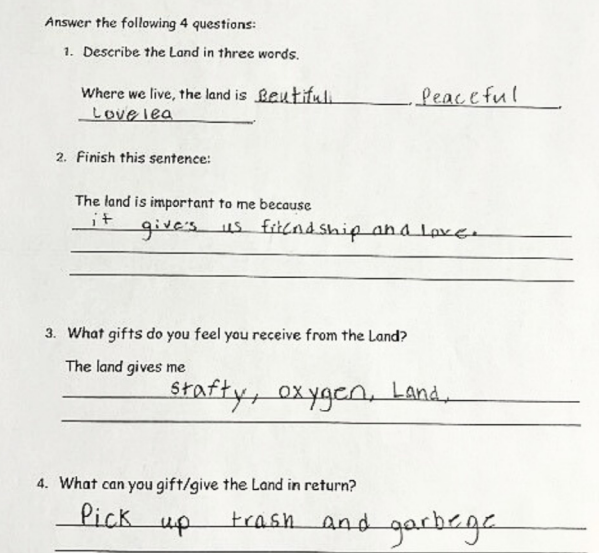
	Not yet	I'm Learning	Yes
In familiar settings, I can interact with others and my surroundings respectfully.			
I can take purposeful action to support others and the environment.			

Teacher Reflections and Sample Student Work

I really loved this lesson! This lesson was spread over 2 days and required some pre-teaching about food chains. They learned that there is a very strong relationship between humans and their environment. They also learned that it is all our shared responsibility to care for the local environment.

It was the first huge snowstorm in over 6 weeks and so we ventured out into winter wonderland to go find our sit spots and enjoy nature very bundled up. We were unable to do the nature journals in the forest as initially planned because it was wet and snowy.

The journal activity went well and prompting with "what does the land mean to you" was really thought provoking. I was really surprised at how meaningful the responses were! The most challenging part for the kids was the question: What can you personally gift the Land in return? We had to divert into conversation of tobacco offerings, Indigenous ceremonial practices when hunting, and other ways to show gratitude to the earth. In the end, I gave them a list of collective actions because they just were not able to think past "pick up litter".



Answer the following 4 questions:

1. Describe the Land in three words.

Where we live, the land is Beutiful, Peaceful, Lovelea.

2. Finish this sentence:

The land is important to me because it gives us friendship and love.

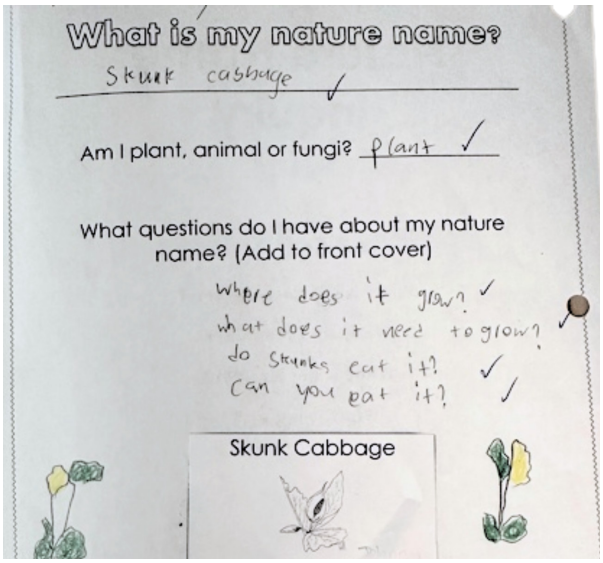
3. What gifts do you feel you receive from the Land?

The land gives me stafty, oxygen, Land.

4. What can you gift/give the Land in return?

Pick up trash and garbage

I think this lesson went really well, and I love how sit spots and outdoor loose parts can be done over and over again as core routines. What was surprising is how repeating a practice really grows over time. For example, the children only had about a 30-second attention span when we started in September. The last sit spot we did on Feb. 26 lasted 40 minutes. Their cognitive stamina increased, their noticing became more attuned, and they were able to name more species over several months. They went from saying "tree" to saying "cedar", "spruce", "Oregon grape".



What is my nature name?

Skunk cabbage ✓

Am I plant, animal or fungi? plant ✓

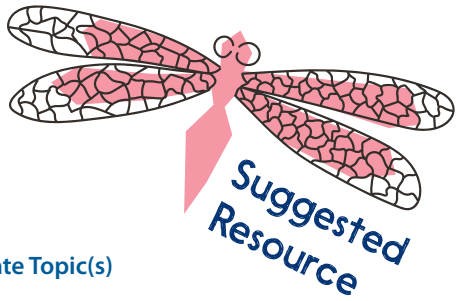
What questions do I have about my nature name? (Add to front cover)

where does it grow? ✓
what does it need to grow? ✓
do skunks eat it? ✓
can you eat it? ✓

Skunk Cabbage

I was surprised at how engaged the kids were with the final partner activity. They had very little experience with this type of bigger project, and they were keen to think critically and creatively. I think the students were able to identify some simple environmental implications of their and others' actions.

Suggested Resources



This list of suggested resources is provided for teacher consideration and to support climate literacy learning. Please follow local school and district policies regarding the approval and selection of learning resources before using in your classroom.

Title	Author	Climate Topic(s)
I am the Storm	Jane Yolen and Heidi E.Y. Stemle	Big weather
Le temps qu'il fait	Les docs Ribambelle	Big weather
National Geographic Kids: Extreme Weather, La Météo, Everything Weather, Storms, etc	Various	Big weather
Tsunami!	Kimiko Kajikawa	Big weather
What is a Thunderstorm? What is a Blizzard? Etc series	Robin Johnson	Big weather
Climate Emergency Atlas	Dan Hooke	Climate change
How do we Stop Climate Change	Tom Jackson	Climate change
I am One: Book of Action	Susan Verde	Climate change
Indigenous Peoples and Climate Change	Marla Tomlinson	Climate change
The Down-to-Earth Guide to Global Warming	Laurie David and Cambria Gordon	Climate change
The Wild	Yuval Zommer	Climate change; Outdoor spaces
To Change a Planet	Christina Soontornvat	Climate change; Big weather
Love, the Earth	Frances Stickley	Climate change; Outdoor spaces
Sila and the Land	Shelby Angalik, Wentanoron Ariana Roundpoint, Lindsay Dupré	Climate change; Outdoor spaces
Walking Trees	Marie-Louise Gay	Climate change; Outdoor spaces
Something, Someday	Amanda Gorman	Climate change; Packaging waste
Let's Walk to School	Deborah Chancellor	Modes of transportation
A Log's Life	Wendy Pfeffer	Outdoor spaces
A Stone Sat Still	Brendan Wenzel	Outdoor spaces
A Walk in the Forest	Maria Dek	Outdoor spaces
A Walk on the Tundra	Rebecca Hainnu and Anna Ziegler	Outdoor spaces
Anywhere Artist	Nikki Slade Robinson	Outdoor spaces
Be a Good Ancestor	Leona Prince and Gabrielle Prince	Outdoor spaces
Be a Tree!	Maria Gianferrari	Outdoor spaces

Braiding Sweetgrass for Young Adults	Robin Wall Kimmerer, Monique Gray Smith	Outdoor spaces
Can you Hear the Plants Speak	Nicholas Hummingbird	Outdoor spaces
Finding Wild	Megan Wagner Lloyd	Outdoor spaces
Fishing with Grandma	Susan Avingaq and Maren Vsetulla	Outdoor spaces
I Hear You Forest	Kallie George	Outdoor spaces
I Wonder	Annaka Harris	Outdoor spaces
If you Find a Rock	Peggy Christian	Outdoor spaces
If You Take Away the Otter	Susannah Buhrman-Deever	Outdoor spaces
Lessons from Mother Earth	Elaine McLeod	Outdoor spaces
Mes 5 sens series	Sally Hewitt	Outdoor spaces
Nature's Toy Box	Wenda Shurety	Outdoor spaces
Not a Stick	Antoinette Poutis	Outdoor spaces
Noticing	Kobi Yamada	Outdoor spaces
Orca Chief	Roy Henry Vickers	Outdoor spaces
Outside In	Deborah Underwood	Outdoor spaces
Over and Under the Pond	Kate Messner	Outdoor spaces
Owl Moon	Jane Yolen	Outdoor spaces
Sk'ad'a Stories picture book series	Sara Florence Davidson	Outdoor spaces
Stand Like a Cedar	Nicola Campbell	Outdoor spaces
Step Gently Out	Helen Frost and Rick Lieder	Outdoor spaces
The Earth Gives More	Sue Fliess	Outdoor spaces
The Hike	Alison Farrell	Outdoor spaces
The Tree Lady	Joseph Hopkins	Outdoor spaces
Walking Together	Elder Albert Marshall and Louise Zimanyi	Outdoor spaces
What Forest Knows	George Ella Lyon	Outdoor spaces
You are Never Alone	Elin Kelsey	Outdoor spaces
Too Many Toys	David Shannon	Repairing, reusing, and sharing; Packaging waste
Harlem Grown: How One Big Idea Transformed a Neighborhood	Tony Hillery	Where does food come from?
How Did That Get In My Lunchbox?	Chris Butterworth	Where does food come from?
Berry Song	Michaela Goade	Where does food come from?; Outdoor spaces
Oolichan Moon	Samantha Beynon	Where does food come from?; Outdoor spaces

Acknowledgment

This resource was developed with extensive support and input from the British Columbia Teachers' Federation, Classrooms to Communities Education

Network, Environmental Educators Provincial Specialists' Association (EEPSA), the Institute for Environmental Learning, the First Nations Education Steering Committee, The Mental Health and Climate Change Alliance, and academic partners at Simon Fraser University and Vancouver Island University. The Province is extremely grateful for the knowledge and resources provided by this network.

Ministry partners included Ministry of Emergency Management and Climate Readiness and Ministry of Health in addition to Ministry of Education and Child Care and Ministry of Energy and Climate Solutions.