Learning from the Land

Public Health Association of BC

BRITISH COLUMBIA

FARM to SCHOOL BC

Public Health Agency of Canada

Agence de la santé publique du Canada

RESOURCES AND STORIES FROM K-12 SCHOOLS TO SUPPORT ENGAGEMENT WITH INDIGENOUS PLANTS AND PEDAGOGY

TABLE OF CONTENTS

ABOUT THE AUTHOR

PHABC is a non-profit charity organization whose mission is to promote population health and support capacity building for public health professionals in the province. PHABC fulfills its mission through advocacy, collaboration and engagement activities, education and research throughout the spectrum of public health practice including prevention, promotion, protection and policy. Their priorities include eliminating poverty; reducing health/socio-economic inequities; addressing climate change & healthy environments; contributing to a sustainable, equitable economy; and preventing violence. PHABC champions a number of public health programs including Farm to School BC (F2SBC), a healthy eating program for K-12 students with an expanding provincial network, supporting 200+ school food and garden projects in urban, rural, remote, and Indigenous communities throughout the province.

By linking schools to their communities and mobilizing stakeholders, the program empowers students, builds school capacity around healthy eating, strengthens community relations, and promotes sustainable regional food systems. F2SBC programs include (but are not limited to): gardens, microgreens, cooking, farm tours, native plant gardens, composting, and more.

PHABC is a culturally sensitive organization and has applied the United Nations Declaration of Indigenous Peoples (UNDRIP) principles to our programs. PHABC has Indigenous representation on their Board of Directors and has had an Elder-in-Residence for over a decade who supports their public health programming and Indigenous partnerships. PHABC celebrates the work accomplished in partnership with Indigenous communities, while acknowledging the need both organizationally and in their programming for deeper decolonizing and reconciliation work to address anti-Indigenous racism and to build Indigenous food sovereignty, and PHABC dedicates themselves to this purpose.

Public Health Association of BC

ACKNOWLEDGEMENTS

We would like to thank the BC Ministry of Agriculture, Food and Fisheries and Public Health Agency of Canada for providing funding for the creation of this document and to the Province of British Columbia and the Provincial Health Services Authority for supporting the Farm to School BC program. A special thank you to Marcus Lobb, Addie de Candole, and Meryn Corkery for project management and writing this document. Thank you to Samantha Gambling, Richard Han and Aaren Topley for significant input into the document, and thank you to Ashley Bangsund, Robert Clifton, Sonya McRae, Heather Froste, Lori Snyder, Sarah Rhude, Emma Milliken, and Heidi Wood who reviewed this document and/or provided insight into the conceptualization.

Finally, thank you to all of the individuals, partners and organizations who make these programs possible:

PICTURES ON PAGE 1,2, 3, 6, 17, 20 (TOP PHOTO), 34, 52, 53, 54 WERE TAKEN BY THANUSHI EAGALLE AT THE FARM TO SCHOOL VANCOUVER REGION SPRING CELEBRATION.
OTHER PHOTOS WERE CONTRIBUTED BY COMMUNITY PARTNERS AND TEACHERS ACROSS THE VARIOUS PROJECTS.
IF YOU HAVE TAKEN ONE OF THESE PHOTOS AND WOULD LIKE TO BE CREDITED, PLEASE REACH OUT AT CAPITALREGION@FARMTOSCHOOLBC.CA

Harvest4Knowledge

Funders, sponsors, and partners: Habitat Acquisition Trust; Horner Foundation; LifeCycles Project Society; Ministry of Public Safety and Solicitor General; Parks Canada; Provincial Health Services Authority; Public Health Association of BC; BC Ministry of Health; Saanich Native Plants; School District 61 and the Indigenous Education Department; and Songhees and Esquimalt Nation.

Sarah Rhude, Paola Bell, Aaren Topley, Hereditary Chief Edward Thomas, Elder Maryann Thomas Cheryl Bryce, Elder Elmer George, Butch Dick, Diane Sam, Nella Nelson, Tracy Horner, Sonya McRae, Rachel Trebilco, Emma Milliken, Kristen Miskelly, Paige Erickson-McGee, Fiona Devereaux, Shereen Kukhabryson, Richard Han, Geoff Orme, Leah Seltzer, Wendy Tyrell, Tiffany Joseph and all other participating teachers, administrators, advisors and community partners.

Local Foods to School

Funders, sponsors, and partners: Q'wemtsín Health Society, Farm to Cafeteria Canada, Social Planning and Research Council of BC, Investing in Canada Infrastructure Program for Rural and Northern Communities, SPARC BC, Tree Canada, ISPARC, Farm to School BC. Local food Infrastructure Fund, Agriculture and Agri-Food Canada.

Bobbi Sasakamooose, Laura Kalina, Mitchell Ward, Robyn McLean, Shelaigh Garson, Marie Barlett, Jesse Veenstra, Colleen Lessman, Maureez Zutz.

Indigenous Foodscapes

Funders, sponsors, and partners: xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səl̓ilwətaɬ (Tsleil-Waututh) Nations; City of Vancouver; Environmental Youth Alliance; EARTH & Co.; Fresh Roots (Suwa'lkh School); Ministry of Public Safety and Solicitor General; Mount Pleasant Neighbourhood House; Net Zero Waste; Provincial Health Services Authority; Public Health Association of BC; Ministry of Health; and School District 39 (Vancouver)'s Indigenous Education and Sustainability Departments.

Lori Snyder, Robert Clifton, Samantha Gambling, Ashley Bangsund, Jolene Andrew, Trudi Harris, Chas Desjarlais, Leona Brown, Vanessa Campbell, Jeri Sparrow, Senaqwila Wyss, Terry Point, Amanda White, Justin Morrison, Susan McCallum, Jess Henry, Gray Oron, Mateo Ocejo, Brenda Koch, Vanessa Lam, Richard Han, Tara Moreau, Thanu Eagalle, Ron Macdonald, Jenny van Enckevort, Stacy Friedman Charlotte Hewson, Greg Canning, Ian DeLong, and all other participating teachers, administrators, advisors and community partners, and Indigenous Foodscapes working group members.

Public Health Association of BC · British Columbia · Farm to School BC · Q'wemtsín Health Society · Public Health Agency of Canada / Agence de la santé publique du Canada

PREAMBLE:

"An Invitation and a Provocation"

'Learning from the Land: Resources and stories from K-12 schools engaging with Indigenous plants and pedagogy' is a written compilation of resources and stories highlighting programs related to Indigenous plants and pedagogy within schools located in what is colonially known today as British Columbia, Canada.[1] This document intends to inspire and support teachers, school administrators, and community members who are interested in developing similar initiatives connected to K-12 schools. This document was created with input from partners across the programs, including Indigenous educators, school district administrators, community members and Indigenous Knowledge Keepers.

This document is both an "invitation and a provocation" (Robert Clifton, Indigenous Education Department at SD39). On the one hand, it invites the reader to explore new ways of engaging with and learning about plants, land and place, and community. It invites one to commit to life, to nurturing, to rewilding, restoring and supporting our plants, animal, and human relations. It is also an invitation to include Indigenous land-based pedagogies and practices within existing school contexts in a meaningful and respectful way.

On the other hand, this guide also acts as a provocation for the reader to dive deeper into their learning around native plants and traditional pedagogies, such as Traditional Ecological Knowledge (TEK; see the Key Terms section). We hope that this resource provokes you to explore your own understanding of identity, power, and connection to place and culture. Let the following questions guide you as you read through this document:

What is the history of the land you are on? How do the local Indigenous peoples engage and relate to plants and the land you live on?

Who holds knowledge in your classroom and in your local area? How is knowledge being shared?

What plants are already growing on your school grounds? How do these plants and environments change with the seasons?

Who are the individuals and collectives engaging in similar work and dedicated to restoring culture, land, and community in your region?

Many Indigenous teachings rely on storytelling and oral histories; they are often delivered as embodied, physical teachings that rely on relationship building between community members, the land and place, plants, animals, and other more-than-human beings. Therefore, in its written form, we recognize that this "Learning from the Land" document will not be able to capture Indigenous teachings in their true form. However, we hope this document offers guidance that can be applied in diverse contexts. Rather than prescriptive, step-by-step instructions, we offer a series of learnings from existing programs and an invitation to explore these concepts further in your context. By the very nature of these projects, they will vary from place to place and must take into account local ecology and connections based on the land and place, history, and ongoing relationships.

Introduction

About this toolkit

This toolkit introduces initiatives in different regions, in what is colonially known as British Columbia, that connect local and traditional Indigenous plants and pedagogy to K-12 schools and their communities. Three Indigenous plant and pedagogy programs are highlighted:

1. **The Harvest4Knowledge** program takes place on the homeland of the Lekwungen people, now known as the Songhees and Esquimalt Nations on South Vancouver Island.

2. **The Indigenous Foodscapes program** takes place on the unceded, traditional and ancestral territories of the hən'q'əmin'əm' and Skwxwú7mesh speaking peoples of the xʷməθkʷəy'əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Nations on the South Coast of BC.

3. **Local Foods to School** that takes place on Stk'emlupsemc te Secwépemc Nation homelands in Interior BC.

The role of PHABC and F2SBC in these projects vary. F2SBC provides support directly through Community Animator coordination for two of these projects (Indigenous Foodscapes and Harvest4Knowledge) and indirectly, through funding and support in the case of the Local Foods to School Program.

Intended Audience

This toolkit is primarily intended for teachers, school administrators, and community members who are planning their own Indigenous plant and pedagogy projects, but everyone who is connected to the school community may glean insight from the stories and resources provided. There are key characteristics of the three programs embedded in this document as well as best practices, lessons learned, challenges, and stories from school communities. Resources, including where to source Indigenous plants and lesson plans, are also included.

Background

Context

It is important to consider the historical and cultural context in which these Indigenous plant and pedagogy projects exist. Since time immemorial the Indigenous populations of what is colonially known as Canada developed complex and varied food systems that coexisted with the land, plants and animals within and across their territories [2]. Elaborate trade systems developed and populations flourished with access to culturally relevant, nutritious and readily available food products[3].

The introduction of Westernized food and education systems after contact has eroded Indigenous food systems and disrupted trade routes thousands of years old. Residential school systems separated Indigenous youth from their families, resulting in the loss of traditional ways of knowing and being, and failed to provide adequate access to nutritious food for the children in care[4]. Forced agricultural labour[5] and the unethical treatment of Indigenous children[6] were commonplace in these Residential schools, the recent discovery of thousands of unmarked graves across Canada only begins to tell the tale of the atrocities committed.

The development of the reserve system and expansion of agricultural land exclusively for western producers continues to separate Indigenous peoples from their territories, cutting off access to their traditional lands, foods, language, and culture[7]. These forced shifts in food and education systems for Indigenous peoples in Canada are part of the larger legacy of colonialism, and the resulting intergenerational trauma and long-term negative health impacts (such as high rates of chronic disease) are still felt and ongoing today in Indigenous communities[8]. But these stories also tell a tale of resilience; Indigenous people are here today, reclaiming land, revitalizing language and fighting back against unjust systems. Stories like the ones in

this document exemplify the strength and wisdom of Indigenous people.

This brief background section cannot even begin to cover the nuance and complexity of the history and ongoing treatment of Indigenous peoples in Canada today, and the impact that has had on relationships to the land and culturally relevant foods.

For more information about the ongoing impacts of colonialism in Canada, see the Indigenous Canada MOOC from the University of Alberta; for British Columbia specific materials, see the Union of British Columbia Indian Chiefs (UBCIC) Resources section and the "Our Homes are Bleeding - Digital Collection". Other resources that may be helpful are San'yas online Indigenous Cultural Safety training program, Racial Equity Tools, and the Stolen Lives: Indigenous Peoples of Canada and the Indian Residential Schools resource from Facing History.

Land-Based Learning in the BC Curriculum

In 2016, the BC K-12 Curriculum was amended to include the BC First Peoples Principles of Learning in response to the Truth and Reconciliation Commission's calls to action for inclusive and culturally appropriate education. This required First Nations' content to be embedded across all grades and subjects. While this is a huge step towards restoring traditional Indigenous ways of teaching and learning, BC teachers have identified that more support is needed for them to meaningfully model the First Peoples Principles of Learning and embed the teachings into their classrooms and teaching practice.

One opportunity to embed First Peoples Principles of Learning into classrooms across the province is through "land-based learning", which recognizes the connection between people and the land and place, and centres Indigenous ways of knowing and being in its lessons (see the key terms section for a full definition). Land-based learning teaches respect and builds connection to the non-human world, allowing students to see plants and other living entities as teachers, instead of the teachers being the sole Knowledge Keepers.

HARVEST4KNOWLEDGE

Land-based learning offers an opportunity for youth to experience physical, mental, emotional and cultural healing. For example, many teachers, students, and other community members attest to how returning to the land is therapeutic and promotes positive mental health and feelings of inclusion; this is supported by academic research as well[9,10] . Land-based learning also promotes the positive effects of spending time outdoors and physical activity. When embedded with learning around native foods (i.e. saskatoon and salal berries, nodding onions), medicine plants (e.g. yarrow, pearly everlasting, tobacco[11], cedar) and traditional food practices; land-based learning offers a powerful way to reconnect to culture and language. According to Chas Dejarlias, the District Principal of Indigenous Education at the Vancouver School Board, Indigenous plant and pedagogy projects are "about reclaiming the language of our plants and making that visible to everyone." (F2SVA Hub: Indigenous Foodscapes Video). Given the interconnection between land, place, and language, Indigenous plant and pedagogy projects can act as valuable tools for language revitalization. In addition to engaging with plants, there are other practices that can be done on the land in an embodied way, such as making art and drumming, which provide students with opportunities to authentically experience Indigenous cultures by bringing in Knowledge Keepers and Elders.

Key Terms

Community Animators: As part of the Farm to School BC program, Community Animators work alongside teachers, students, public health officials, and local organizations within their designated Regional Hubs to support food literacy for K-12 schools. Community Animators place local people at the centre of all they do, building bridges and strengthening connections to create sustainable solutions and programs.

Indigenous foodscape: A foodscape is a physical space for growing food, medicine, and other culturally significant plants, as well as a social space for sharing, preparing, eating, and learning about food. This may include native plant gardens, gathering spaces, outdoor classrooms, and more. This term was envisioned by Lori Snyder, a Métis herbalist and educator who worked on the Indigenous Foodscapes project.

Indigenous plants: Includes both native plants to BC and other traditional and culturally-significant plants used by Indigenous peoples. Indigenous plants and native plants are used throughout this document depending on the project or perspective.

Indigenous, First Nations, Aboriginal: Within this document, the term Indigenous is most commonly used when referring to the First Peoples of Canada. In recent years there has been a shift away from the usage of Aboriginal, a term that has complicated origins and falls short of recognizing the deep history of Indigenous people in North America. First Nations, Metis and Inuit may also be used when describing the first inhabitants of what is now known as Canada. If you are unsure of which terms are appropriate to use, ask the Nations you are working with. See these resources for more details: Why we say "Indigenous" instead of "Aboriginal", Terminology page from the Indigenous Foundations Resource from University of British Columbia.

Pedagogy: The method and practice of teaching, especially as an academic subject or theoretical concept.

Land-based learning: A pedagogical approach that recognizes the deep connection between Indigenous peoples and land, and is grounded in Indigenous knowledge and culture; this approach relies on acknowledging the teachings that occur while cultivating the relationship between people and the Land (see this article from Ontario Institute for Studies in Education and Learning from the Homeland; An Emerging Process for Indigenizing Education," by the W̱SÁNEĆ School Board and Tye Swallow, found in Knowing Home: Braiding Indigenous Science with Western Science, Book 2, page 206). Land-based learning encompasses many activities, including but not limited to harvesting traditional foods and medicines, observing the world around us, engaging in ceremony, fishing, and more.

Learning Circle: A Learning Circle is a community development process to build, strengthen and expand collective farm to school or local food to school efforts. Key stakeholders who influence a particular issue (or set of issues) are brought together for a series of well facilitated meetings to identify short term, realistic, and measurable goals that address those issues.

Traditional Ecological Knowledge (TEK): Traditional Ecological Knowledge is rooted in the traditions of each Nation but is not limited to the past, as it is continually adapting to modern times. TEK is holistic, passed on from generation to generation, and relationships (people, animals, plants, land and place) are essential to this pedagogy. Each First Nation has their own TEK specific to their territories and that it is their intellectual property.

Harvest4Knowledge
(Homeland of the Lekwungen people)

Program Model

Harvest4Knowledge is an Indigenous plant and traditional knowledge project taking place on the homeland of the Lekwungen people, now known as the Songhees and Esquimalt Nations. The project has set out to bring Indigenous plants and traditional knowledge into the minds and hearts of children and youth. In 2016, School District 61 (SD61) Indigeous Art and Cultural Facilitator, Sarah Rhude, worked with students to create an Indigenous plant garden and camas meadow at Victoria High School. Initial funding was provided by Farm to School BC (F2SBC) and F2SBC's Capital Region Community Animator, Aaren Topley, worked with Sarah to apply for and secure additional funding through the Horner Foundation to expand the project.

Summary

Harvest4Knowledge by the numbers:

- 6 schools
- 10 community organizations
- 20+ teachers
- 500+ students

Key Partners and Roles:

Lekwungen Harvest4Knowledge Coordinator: Guidance and direction with protocols and cultural safety practices.

School District 61 (SD61) - Indigenous Education Department (IED): The driving force behind the logistical planning and implementation of the gardens; supported cultural knowledge and knowledge translation between Indigenous ways of knowing and being and colonial systems/ institutions, supported the education development including the signage program.

Farm to School BC and Public Health Association of BC: Farm to School BC Community Animator supported background administration and coordination of the project. Navigated colonial systems and institutions for the project's success. Hired and supported Songhees and Esquimalt community members to participate in the project. Provided honorarium to Songhees and Esquimalt community for cultural knowledge and protocol procedures.

Songhees and Esquimalt Nation: Provided leadership and guidance with protocols, including language components, and offered blessings for school gardens. Members of the Nation were hired or provided honorarium for time and knowledge.

Saanich Native Plants Nursery: Supported the selection of Indigenous plants, offered training for the teachers, supported teachers and students in planting and maintaining the gardens.

Parks Canada: Offered their expertise on Indigenous plants, restoration, and ecosystem management.

LifeCycles Project Society: Local non-profit which assisted in the implementation of the school gardens.

Habitat Acquisition Trust (NGO): Supported the selection of Indigenous plants, offered training for the teachers and students in planting and maintaining the gardens.

Funders: Horner Foundation, BC Ministry of Health, Provincial Health Services Authority, Ministry of Public Safety and Solicitor General Civil Forfeiture Grant, SD61 IED.

Program Activities

The Harvest4Knowledge project was developed through an iterative process and did not flow in a linear fashion. Relationships were the foundation of the project. The F2SBC Community Animator for the Capital Region (ie. Capital Region Animator) began to develop a relationship with the SD61 Indigenous Arts and Culture Facilitator before the full conceptualization of the project. Funding was secured through funders who were participating in a decolonization journey with the Capital Region Animator and other food system actors in the region.

Granting Process

The granting process was by invite only and schools were guaranteed to receive funding if they completed and submitted a Letter of Intent and a proposal with a garden design by set deadlines. The top six schools were selected based on the following criteria: highest Indigenous student populations, feeder schools to Songhees and Esquimalt Nation's children and youth, and presence of Indigenous Education teachers.

Hereditary Chief Edward Thomas was brought on as the Lekwungen Harvest4Knowledge Coordinator to help ensure Lekwungen teachings, protocol and knowledge was respected during all aspects of the project. Chief Thomas also worked closely with Elder Elmer George during the planning stages. Together, with the selected schools' respective Indigenous Education teachers, SD61 Art and Culture Facilitator, and the Capital Region Animator, a formal Harvest4Knowledge working group was established to begin to learn from each other and develop the project.

Over two years, this group worked on plant selection, garden design and implementation, and plant signage. Each aspect of the project had its own complex and beautiful stories and process; however, one theme was consistent throughout: working as a group was foundational to the project's success. In the second year of the project, Hereditary Chief Edward Thomas passed the torch to Diane Sam who succeeded as the Lekwungen Harvest4Knowledge Coordinator. Both Hereditary Chief Edward Thomas and Diane Sam played a vital role in interweaving Songhees and Esquimalt language and protocol into every aspect of the project. Finally, a video was created to tell the story of the project.

The program was fortunate to have a strong group of teachers, and community support, who were willing and able to meet in person during the development stages of the project. This team approach was critical in supporting the overall cohesion between the visions

for each individual garden and the project as a whole. Additionally, a new group emailing list was frequently used to share events and resources and allow for direct question-and-answer conversations. Before proceeding with major next steps in the program, the working group made a point of communicating their intentions with a representative from the Nations.

Signage and Website Development

The goal of the signage program was to share the beautiful Lekwungen language with students and to elevate cultural educational opportunities and engage students on a more personal level. The developed educational signage was standardized across the school disctrict, ensuring that teachers who move to another school with a new garden would still feel comfortable engaging students in that new garden. The signs were designed to be interactive; each plant sign includes QR codes that students can scan to hear the name of the plant in the Lekwungen language.

A large format sign was created by a local artist who collaborated with the team and students to create images recognizing the significance of camas meadows: including plants and animals that live in the meadows and the meadows' relationships to the land and people. Other resources included information related to the seasons and cycles of the plants, a territory acknowledgement, and further information about the project. A dedicated page on SD61's website is currently being created by the District's Indigenous Education Department to house all the information relevant to the project. Once launched, resources will regularly be added to the page, including links to each Nations' websites, partner information, and videos and stories from the schools.

Reflection

Many hours over the two year development phase were invested in learning, discussing the goals of the program, for whom it would be beneficial for, and why. A key challenge of a district-wide program is the need for long-term support and coordination, a challenge if funding is limited. As well, the current structure of the public education system, led to challenges with process and practice.

The initiation of a program of this scale across other jurisdictions or school districts would benefit greatly from the support of paid staff who can assist in the planning and communication to all the partners and teachers involved. Connection to the classroom is pivotal for long-term success.

Learnings and Observations:

FUNDING:

Sufficient financial support was crucial to the success of this program. It is important to budget honoraria for project consultation and First Nations engagement. The total budget for the first two years was $65,000.

RELATIONSHIPS:

Building relationships with the local Nations was essential to the program development. Improving existing relationships with the Nations greatly benefitted the evolution of the program.

SCHOOL DISTRICT CHAMPIONS:

Having support at different levels of the school district was vital, as many people were involved in transforming a garden from a sketch, to a living, growing learning environment. Champions included teachers, senior management, the Indigenous Education Department, facilities management, and more.

CULTURE SHIFTS:

Decolonizing the mindset around foods and land is a process worth investing time and funds into. Consider reaching out to a local cultural sensitivity training organization to see if they can offer a group training.

> **"Focus on the process, rather than the outcome. The relationships are more important than deadlines for the program.**
>
> - Aaren Topley, F2SBC Capital Region Animator

Story from School Community:
Harvest4Knowledge

Shoreline Community Middle School

> "Land is an entry point for learning about Indigenous culture.
> - Emma Milliken, Teacher, Spectrum Community School

Garden Description

These gardens are ultimately about decolonizing and their very essence is about the reclaiming of space. These gardens give us the opportunity to connect to the land, and reflect upon the relationship of the plants and people since time immemorial. The Harvest4Knowledge gardens are about building relationships with plants, the land, and the community - and yourself!

This garden included:

- Camas meadows
- Medicinal and fruit bearing plants
- Split rail cedar fence surrounding the garden
- Lekwungen language signage at the garden entrance and within the garden itself

Engaging with Indigenous Plants and Pedagogy

Before the gardens were planted each was blessed by a local Elder. This blessing was the beginning of our positive engagement with the garden. All actions in the garden (e.g. planting new Indigenous plants, weeding out unwanted plants, or building pathways) involve students from the school. Some teachers use the garden space as an outdoor classroom and have tied the plants and garden to the curriculum: including Science, English, Biology, Social Studies and Art. Although the most vital way of engaging with the garden, according to Sonya McRae (Teacher, Shoreline), is to simply spend time in it, getting your hands dirty, and observing the seasonal changes. Telling stories in the garden has also become popular activity among students and teachers, especially when discussing First Nations culture and history.

As the seasons change, students continue to support the maintenance of the garden. In the first year of the gardens, a great deal of manual labour was needed to build the beds and plant the seeds and seedlings. Each spring requires work to weed the gardens and keep the pathways visible, while each fall the garden is put to bed for the winter season. During the winter months students continue to engage with the garden by working with plants they may have harvested during the summer months. This might include drying the plants for teas or making salves. As the winter rolls into spring, students visit the garden looking for which plants will offer the earliest signs of green - indicating the plants survived the winter and are beginning to grow again.

Some of the key plants that Shoreline planted in the beginning were: camas, barestem desert parsley, seablush, june grass, nodding onion, miners lettuce, woolly sunflower, thimble berry and salmon berry. Other schools in the district planted medicine gardens of sage, sweetgrass, and tobacco, which holds a ceremonial role for some First Nations.

> **"The gardens elevate Indigenous voices and histories, these spaces are facts on the ground.**
>
> - Emma Milliken,
> Teacher, Spectrum Community School

Impact on School Community

- Significantly increased student awareness of native plants, Indigenous cultures and history, and ecosystem biodiversity.
- Students have immensely enjoyed spending time alone or socializing with fellow classmates in a space that is intentional and quiet.
- Teachers in the program expressed pleasant surprise related to the behavioral changes they were seeing in their students, especially those who found normal classroom settings challenging. Many of the students who appeared disinterested in classroom activities, would show a strong willingness to engage in the gardens and sometimes proved to be the most reliable students supporting the garden.
- The sturdy split rail cedar fence surrounding the garden and educational signage have made the garden a welcoming spot for local community members, some have been seen pausing during their weekend dog walks to admire the garden.

> **"Learning in the garden is more direct than a textbook, it's tangible and immediate.**
>
> - Sonya McRae, Teacher, Shoreline Middle School

Learnings and Observations

The willingness to engage in the garden and curiosity of its contents has been growing within the student body, as observed by multiple teachers in the school. However, teacher engagement has not always been easy when integrating the garden into the wider school culture. Education and confidence building among staff is crucial, as many teachers feel intimidated and are worried they might damage the garden if they do not carry enough knowledge about the plants. Hiring someone to manage the garden is highly beneficial, as it is challenging for teachers to take on this responsibility without releasing other duties required of them.

> **"Start small, incorporate the garden into school culture, and be clear about your needs to the community.**
>
> - Sonya McRae, Teacher, Shoreline Middle School

Indigenous Foodscapes

(xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Territories)

Program Model

Indigenous Foodscapes is an Indigenous plant and pedagogy pilot project taking place on the unceded territories of (xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Nations. The project set out to bring native plants and traditional knowledge into the minds, hearts, and bellies of children and youth. This project was inspired by a growing interest within school communities to bring Indigenous pedagogies and practices into the classroom, honouring truth and reconciliation mandates in the new BC Curriculum. In 2016, Farm to School BC's Vancouver Area Region Community Animator, Samantha Gambling, worked with Métis herbalist and educator Lori Snyder to secure funding from the City of Vancouver's Greenest City Grant to launch this program.

Summary

Indigenous Foodscapes numbers:

- 9 schools across Vancouver
- 15+ community partners
- 40 teachers/school staff and community partners involved across school based teams
- 55 classes involved

Key Partners and Roles:

Vancouver School Board (VSB) - Indigenous Education and Sustainability Departments: connecting to resources and cultural teachings, supporting teachers, navigating school board policy

Indigenous Foodscapes Coordinator: Lori Snyder, a Métis herbalist and educator, working with schools to conceptualize projects and lead workshops, maintaining relationships with each school to support them as their projects progressed.

Farm to School BC and Public Health Association of BC: Community Animator worked with schools to connect to resources, organized Pro-D opportunities and learning circles, convened the working group, wrote grants, created partnerships, and built relationships. Navigated colonial systems and institutions for the project's success and supported others' participation in the project.

Indigenous Foodscapes Committees: Each school formed a committee of 2-5 people (teachers, administrators, community members) to lead the project at the school level.

Indigenous Foodscapes Working Group: This working group included individuals from the school district, Vancouver Coastal Health, local Nations, and non-profit organizations that were involved in Indigenous food and education programs around the City of Vancouver. This working group supported the process of funding schools to build and engage with native plant gardens, providing ongoing support as a network for schools to integrate native plants and pedagogies. The goal of the working group was to provide guidance and feedback on the grant process and support schools in identifying resources, contacting experts, sharing protocols, and troubleshooting problems.

Susan McCallum: Local artist who created imagery for the native plant posters.

In-kind donors: Environmental Youth Alliance (EYA) (donated native plants), Su'walkh (donated/sold native plants), Net Zero Waste (donated soil).

Funders: City of Vancouver Greenest City Grant, Ministry of Public Safety and Solicitor General Civil Forfeiture Grant, Provincial Health Services Authority; BC Ministry of Health

Program Activities

September - December 2017

The first step of this project was the formation of Indigenous Foodscapes working group, to guide the development of this project. The working group members identified schools that were both interested and ready to participate in the project, and developed a collaborative granting process. The first part of this collaborative granting process included hosting a Leaning Circle comprised of interested schools to discuss project visions and provide feedback on how funding could best be spent to advance Indigenous garden and pedagogy projects at their schools. The schools collectively identified three core activities that was included in this Indigenous Foodscapes program:

1. **Educational workshops:** hosted by local Knowledge Keepers, as well as opportunities for professional development

2. **Living Library (infrastructure):** three schools received funds to create new native plant gardens; two schools received funds to repair existing gardens; the remaining schools decided to plant native plants in existing school garden beds

3. **Celebration:** All schools participated in an Indigenous plant and pedagogy celebration, funded and coordinated by Farm to School BC and partners from the working group.

January - April 2018

Initial school site visits were held with the Indigenous Foodscapes Coordinator to assist with garden planning. This was done in partnership with UBC post-secondary students to identify existing native plant assets on school grounds that could be used by teachers and students for workshops and classroom activities. In the spring schools were directed to local non-profit native plant nurseries to source local

native plants for their gardens. During this time, the schools also used their first round of funding to host Indigenous plant and pedagogy workshops with local Knowledge Keepers.

April - June 2018

In the last couple months of the school year, check-in meetings were held with the schools to confirm future funding needs for their living libraries and to report back on progress to date. By June 2018, any new garden plans were sent to the school district for formal approval.

September 2018 - September 2019

Over the following school year, numerous activities happened across the nine schools involved in the program. This included building and restoring garden beds, planting native plants (a second round of native plants were offered to schools in spring 2019), and building other infrastructure. Some schools engaged in a variety of educational activities with students, including carving, mason bee workshops, bringing in Elders and other Knowledge Keepers, and foraging on school grounds and in the community. In addition to the funds made available for hosting workshops and purchasing garden materials, there were professional development opportunities available to teachers at the nine participating schools. Teachers who were a part of this project were given opportunities to engage in workshops and other Pro-D/community building activities to support their projects.

May - June 2019

A Spring Celebration was hosted at Xpey̓ Elementary school to celebrate diverse Indigenous Foodscapes projects across Vancouver. This celebration included a meal highlighting Indigenous foods from Chef Maluh, honouring Indigenous women who were championing Indigenous food sovereignty programming in the local community, celebrating the nine schools involved in the program, a native plant giveaway and more. A summary video was released showcasing the schools' projects and the overall program.

September 2020 - September 2021

We are currently in the process of finalizing educational posters and signage for the nine schools (see below for more details).

Communications

An "Indigenous Foodscapes" Google List-serv was created as a space for teachers, school staff and administrators, non-profit partners, community partners, and other Knowledge Keepers in the Vancouver Area to share events, workshops, meetings, photos, and other resources relating to Indigenous food projects and programs at schools. The Indigenous Foodscapes working group had a separate email list to organize meetings, share minutes, and discuss logistics and share internal documents. Email lists were created for each of the Indigenous Foodscapes school committees at all nine schools to provide project and grant updates, discuss project logistics (e.g. organize soil deliveries), and other communications. Additionally, the Indigenous Foodscapes Coordinator often visited the schools and maintained informal communications with each of the school committees. VSB reached out to the local Nations and had a contact at each Nation related to this project.

Signage and Posters

During the Indigenous Foodscapes program, teachers identified the need for additional curricular support to help connect their garden with their classroom lessons. Posters were created in consultation with the local Nations featuring drawings of six native plants, their traditional uses, and their names in Sḵwx̱wú7mesh Snichim, hən̓q̓əmin̓əm̓, English and Latin. This process took time to allow for appropriate input from local Knowledge Keepers. Upon completion of the posters, teachers from each of the nine schools are planning to attend a Learning Circle with local Indigenous Knowledge keepers who will provide teachings around the plants featured in the posters and signage[12].

Those involved in the Indigenous Foodscapes program also saw a need to engage passive users of the garden (such as community members walking by) and to draw attention to the activities happening in the garden through garden signage. To achieve this, a large sign will be mounted on garden beds or adjacent fencing, featuring illustrations of the same native plants on the poster series, along with an invitation or prompt to look for these plants in the garden and in the neighbourhood. This signage will be at each of the nine schools and act as an invitation for engagement with the garden and the Indigenous Foodscapes program.

Reflection

The enthusiasm for this project demonstrated that there was an incredible interest and dedication within the school community to explore native plants, Indigenous culture, and land-based learning at schools. Participants highlighted how these projects supported students' connection to nature and the development of skills including problem-solving and patience. Involvement in the Indigenous Foodscapes program also supported educators in deepening their own understandings of the First Peoples Principles of Learning and how to embed those principles within their teaching practices.

One asset of this Indigenous Foodscapes project was its broad network of partner organizations, many of whom joined the Indigenous Foodscapes working group. Thanks to the generosity of these partners, the program received in-kind and material donations including native plants and soil. Collaborations emerged between these partner organizations around Professional Development opportunities. Resources were shared and ideas and knowledge exchanged. These partnerships allowed the program to stretch the funding and offer diverse learning opportunities for teachers that Farm to School BC or the school district alone would not have been able to provide.

Learnings and Observations:

POLICY CHALLENGES:

While this program explored a different way of approaching a "school garden" (i.e. as a foodscape, a broader concept than just the garden space), this can conflict with policies at the school district level. For example, some school districts only allow raised beds and focus on annual food crops, while some Indigenous Foodscapes participants wanted to emphasize in-ground planting of perennial berry and food plants.

PARTNERSHIPS:

The strength and number of partnerships enriched this project greatly; however, these relationships and partnership development take time and coordination to maintain.

TIME AND RESOURCES:

The potential and interest in this program was high, but the continuity, sustainability, and maintenance of the foodscapes requires time-intensive management by dedicated school and district staff. Maintaining the gardens in the summer season can be difficult. Staff changeovers also challenge and limit the institutional knowledge held by a school or classroom, as well as the sustainability of native plant garden activities and engagement in the Indigenous Foodscapes program.

CONTINUED SUPPORT:

Teachers feel that they need continued support to enrich their learnings related to the native plants and garden maintenance, as well as more opportunities to bring in Indigenous Knowledge Keepers.

Story from School Community:
Indigenous Foodscapes

Nightingale Elementary

> "The garden is an integral space in the school to actually have people take a deep breath and relax and reset. - Teacher at Nightingale

Garden Description

- Ten raised beds, two compost bins, trees (fig, apple, maple, grape vine)
- Mixture of Indigenous and non-Indigenous plants (other fruits and vegetables) and wildflowers
  - Roses, lupins, kale, beets, raspberries, strawberries
- Mason bee house with nesting tunnels
- Stumps and logs used as beds, large boulder as a congregating space; mix of sunny and shady spots
- Calm space, therapeutic location

Engaging with Indigenous Plants and Pedagogy

Students engaged in many activities in the garden, including, but not limited to: mason bee workshops, planting, seed saving, collecting sunflower heads, and building a birdhouse. Organizing different activities throughout the season allowed for students to learn about natural life cycles and the rhythm of environmental indicators, while tying these learnings to the science curriculum. For younger students, a key learning activity was just letting them play and explore the foodscapes on their own!

Once the garden was established, an Indigenous Unveiling Ceremony was held in 2019. Elders were invited to bless the garden. The Ceremony involved the entire school community on a parent-teacher evening, and strengthened community connection to the foodscape. Today, the garden is still in use. The school's artist in residence also brings in Indigenous artists and uses the "[garden] space as a way of inspiring art and bringing students in touch with the land in very creative ways." - Teacher from Nightingale Elementary.

> **"It's part of something that's lacking for a lot of youth and urban dwellers right now. So the more in tune we can get with the land and nature, I think it's better for us..all around...The students at the school, when they have time just in the community or turning over some soil or planting some things, it just brings a sense of calm and connection.**
>
> - Teacher from Nightingale Elementary

Impact on School Community

- **Connecting outdoors:** The opportunity to connect to the outdoors, one that could be lacking in many urban settings, brings a sense of peace and connection to the students and teachers.

- **Community connections:** More and more teachers and parents are seeing the value of outdoor learning and getting involved in this community based project.

- **Increased involvement from the staff:** approximately half of the staff are now engaging in the garden and are "thinking about the garden space not just as a play area but as a place where learning can happen as well". (Teacher at Nightingale) Conversely, before the development of the Indigenous Foodscapes project, only a couple of teachers were involved in the school garden.

- **Student excitement:** Being involved in these projects has sparked an interest and curiosity about nature in students. According to one parent: "My kid is trying to grow everything or saving seeds."

Learnings and Observations

Some key challenges in the project included the regular maintenance of school gardens over the summer months, and competing with other priorities when it came to finding funding and teacher resource allocation. Additionally, some teachers feel that they still have some learning to do about Indigenous plants and their growth and maintenance, as well as all of the health benefits and traditional uses. Teachers also want to find a balance between teaching their students themselves and working with Indigenous Knowledge Keepers to provide specific teachings.

> **"The Indigenous Foodscapes project has triggered even more learning for me which has been really rewarding. I'm learning so many more new things by being involved in it.**
>
> - Teacher from Nightengale Elementary School

Local Foods to School
(Stk'emlupsemc te Secwépemc Nation)

Program Model

Local Foods to School is a program that connects K-12 schools and local farms with Indigenous ways of knowing. Its objectives include: 1) serving healthy meals in schools; 2) improving student nutrition; 3) supporting local and regional farmers/agriculture; 4) fostering the development of school gardening/ greenhouse and food forest projects; and 5) supporting Indigenous hunting, fishing and food gathering cultural practices by providing health and nutritional education opportunities. The model showcases the power of collaboration within a community and between two neighbouring schools both within the Stk'emlupsemc te Secwépemc Nation homelands.

Key Partners and Roles:

Learning Circle /Food Sovereignty Lead/Dietitian from Q'wemtsín Health Society: Plays an innovative role in the development, leadership and overall administration of the QHS's Food Sovereignty initiatives in TteS, Skeetchestn and Whispering Pines/Clinton Indian Band. This role provides consultation to the bands for project management, funding proposal and partnership development, strategic planning and evaluation.

Local Food to School Coordinator from QHS: Provides support to the Schools—Sk'elep and Skeetchestn—in program delivery, curriculum development and evaluation of QHS's food sovereignty programs.

Q'wemtsín HEALTH SOCIETY

Skeetchestn Indian Band (SIB) Knowing Our Roots: This Advisory Committee for broader Food Sovereignty Initiatives in Skeetchestn territory. Originally initiated the garden project at the school and their role has expanded to the food forest and other food sovereignty initiatives.

Skeetchestn Indian Band (SIB): Support and guidance for the program.

Tk'emlups te Secwépemc (TteS) Food Sovereignty Team: Includes Sk'elep School of Excellence - Community Services / Social Development departments, chief and council.

Permaculture Designer: worked with the Skeetchestn Community School to design the food forest; is funded by the Band to do learning activities with the students to link the garden and food forest to the curriculum.

Graphic Facilitator: played a vital role in documenting both of the Learning Circles and capturing the vision of each of the projects.

Split Rock Nursery: purchased plants from an Indigenous owned nursery for the garden projects.

School Garden Advisory: One advisory group at each school, to guide the project activities. The advisory at Skeetchestn consists of a teacher principal, school cook, QHS employee, two Skeetchestn Indian Band (SIB) Social Development employees, a community Elder, and a permaculture designer, and student representatives. At Sk'elep, the advisory consists of one school teacher, two Elders, two QHS employees and a permaculture designer.

Funders: Investing in Canada Infrastructure Program for Rural and Northern Communities, Social Planning & Research Council of BC (SPARC BC), Farm to Cafeteria Canada, Whole Kids Foundation, Tree Canada, ISPARC

Learning Circle Vision

Implemented by:

Knowing Our Roots Committee (Skeetchestn) + Skeetchestn Community School Food Working Group

Food Sovereignty Advisory Committee (TteS) + Sk'elep Community School Food Working Group

> **"Many of our community members no longer fish, hunt or gather but they still want to provide their families with good food. Food sovereignty, or our ability to take control over our food, is so important to make sure our children do not lose the traditions of the past.**
>
> - Elder Tony LaRue

Program Overview

This program, launched in September 2019 when Q'wemtsin Health Society (QHS) received a Local food to School Learning Circle grant from the Social Planning and Research Council of BC (SPARC BC) and Farm to Cafeteria Canada. Over the course of 18 months, the QHS Food Sovereignty team facilitated Learning Circle meetings, in partnership with Marie Bartlett, Graphic Facilitator from Thompson River University, for both Sk'elep School of Excellence (Tk'emlúps te Secwépemc or TteS) and Skeetchestn Community School (SCS) (Skeetchestn Indian Band) to build and strengthen community practices around Local Foods to School. The goal of the program was to increase the amount of food in school that is local, traditional, healthy, and reflective of local Indigenous cultural practices, including food grown, purchased, gathered nearby and/or donated to the school. So far, the program has achieved its goal and has increased access to food at both the community and school level, generating excitement from the community members.

Program Activities

Fall 2018

Skeetchestn Community School (SCS) took the lead in the region. In the fall of 2018 the project was initiated by a small advisory committee called "Knowing our Roots". The members helped to support and guide the implementation of the school's garden program and this has since evolved to focus on working alongside the wider Skeetchestn community with a new "Garden Advisory Committee" replacing it at the school level.

Spring 2019

In May 2019, the garden installation, took place at SCS and included ten raised beds and an automatic watering system used for growing a variety of vegetables and herbs, along with flowering plants chosen to attract pollinators. While SCS was initiating its garden project, Sk'elep School of Excellence was beginning their planning process. Early 2019 saw the

development of the Garden Advisory Committee at Sk'elep, which proposed the development of the school garden in the following phases (in alignment with SCS activities): Garden beds, Berry Walk, and eventually a Food Forest.

Fall 2019

Activities underway at both schools were catalyzed by the receipt of a Local Food to School Learning Circle grant as part of F2CC's Farm to School: Canada Digs In! intiative. The garden at SCS was formally launched in the fall with the support of the local bands and the Kamloops Naturalist Club. In November of 2019, the first Learning Circle meeting was held which allowed for networking and information gathering from various local stakeholders and community members. These events helped raise the profile and expand upon the strength of the network. Through discussions at these events, it was determined that the garden was in need of infrastructure upgrades, including greenhouse improvements, composting expansion, and irrigation. These improvements were addressed by the Skeetchestn Indian Band (SIB) Natural Resource Department in 2020. Stairs for accessibility, outdoor washrooms for volunteers, water harvesting, and a root cellar were all identified as necessary additions. These improvements are underway and ongoing.

November 2019

Sk'elep also hosted a Learning Circle in the fall of 2019 which guided their next steps. Activities did not go as planned due to the onset of the COVID-19 pandemic. However, the committee persevered and, with the help of the Thompson Rivers University's Women in Trades program, the school saw the development of ten raised garden beds, a work bench and storage shed during the height of the pandemic. The garden had some vegetables and herbs planted over the summer for the students to access upon their return in the fall. Sk'elep school purchased a salad bar unit and has researched indoor grow towers to supplement the project using the remaining grant funds.

Prior to the Learning Circles, the school's garden projects were at different levels of completion; SCS had an established Food Forest, greenhouse and garden beds, while Sk'elep School of Excellence was just in the early phase of planning for the construction of the raised garden beds. Following these community consultations there has been significant advancements at both schools, including: the development of advisory committees for both communities, infrastructure advancements, successful crops, the initiation of salad bar programs, and some curriculum development such as germination and planting of seeds, learning about seed development and how to care for young plants as they grow, plant life cycles, companion planting, creating optimal conditions for plants by designing structures for the plants to grow on, amending the soil, optimization of water resources, and more.

Spring 2021 and Beyond:

Both schools and the Community Services and/or Social Development departments of the communities are collaborating with QHS to develop a series of gardening videos to be shared within the communities for educational purposes. Collaborations from the Learning Circles led to the completion of an Indigenous Agriculture Assessment to identify how to best support the local farmers and improve access to healthier foods in the schools. Partnerships with Kamloops Food Policy Council and Community Futures Development Corporation of Central Interior First Nation have strengthened the local food economy, including a "regional Food Hub" which will feature the Kweltsken Mobile Food Processing Unit. This Processing unit will be available in the future for the schools and assist with food dehydration and canning with food grown in the garden and Food Forest. Through the food hub, a mobile kitchen will be available for small businesses and community training, as well as a rent-a-chicken program at the schools.

Additionally, Tk'emlúps te Secwépemc, the community that Sk'elep is a part of, has initiated its own community Food Sovereignty team, similar to Knowing our Roots. Sk'elep School of Excellence has representation on this committee and has been collaborating with the community on the construction of a local greenhouse, as well as the development of a new greenhouse; both of which will benefit the school and the community. The committee has been supporting the school in the planning process for the implementation of the proposed Berry Walk, which will take place in 2021.

Reflection

SCS has become a trailblazer in the Indigenous Food Sovereignty movement. Since the establishment of this project, they have shared their successes with neighbouring communities and as a result, there is now a growing interest in community garden projects.

As a result of the Learning Circles and other program activities, there has been increased community interest and involvement at all levels; students are becoming more aware of the importance of making healthy food choices, have an understanding of the nutritional benefits of the food they eat, and are more willing to try food they may be unfamiliar with. People within Skeetchestn who have heard about the school garden and a Food Forest are excited to learn more about what is being done. This has led to the formation of a community group and a youth group that both help maintain the garden during the summer months. The community group includes members who have been accessing social assistance and have faced or are facing unemployment. The garden provides an opportunity for them to learn new skills and participate in important and enjoyable activities.

Skeetchestn Indian Band Chief and Council have expressed full support and interest in ongoing initiatives that have burgeoned from the success of the school garden project. Families and Elders in Skeetchestn have benefited from the delivery of fresh produce baskets during the COVID-19 pandemic, harvested from the school gardens. The school and various classroom Facebook pages highlight the learning taking place in the garden on a daily, weekly, and monthly basis; with photos and explanations of the lessons and activities happening. The students themselves have learned the value of the hard work involved in setting up and tending a garden, along with the daily maintenance needed for successful crops. Government officials are supportive and can see the value of dedicating resources to implementing and improving food focused initiatives in Indigenous communities.

This program has demonstrated the inherent resilience of the residents in these areas and both the communities and schools have shown a marked interest in supporting Indigenous Food Sovereignty initiatives within their territories. The pandemic has heightened both communities' awareness of the need for food security within their lands and strengthened participation in these projects. There is a renewed sense of community ownership within these projects, and increased collaboration between all the stakeholders.

Learnings and Observations:

MENTORSHIP:

Having one school (SCS) take the lead in the community allowed for them to mentor and support the other nearby schools and communities who were able to learn from the school. The hired permaculture designer was also able to provide their plant expertise and mentor teachers to engage with the gardens.

COLLABORATION AND COMMUNITY INVOLVEMENT:

The Learning Circles were essential in developing relationships and articulating a vision. This also allowed for the creation of a long term food sovereignty plan, which helped to secure additional funding. Having widespread community involvement helps to build momentum and sustain the activities at the school.

ESTABLISH SUPPORT FROM ELECTED OFFICIALS:

Building buy-in from Chief and Council by presenting regular updates helped to establish support and communicate the program's progress. This increased their understanding of the project and their willingness to contribute to it by writing letters of support or helping in other ways.

FUNDING:

Adequate funding is vital, and leveraging funds to generate more funds is crucial in ensuring sustainability. A paid position should be dedicated to seeking grants and increasing program funding.

Story from School Community:
Local Foods to School

Skeetchestn Community School

> "It is truly a team effort and the professional help from a permaculture designer has been critical to the project's success.
> - Maureen Zutz, Teacher Skeetchestn Community School

Food Forest / Garden Description

The garden, envisioned by permaculture designer Shelaigh Garson, is a combination of a number of different practices and has been built up over a number of years. Features include:

- Raised vegetable beds,
- a food forest with a variety of fruit trees such as pear, cherry, apple, etc, including 35 fruit trees,
- a wide variety of herbs, berries, and traditional native plants, including companion plantings,
- the incorporation of a swale system for effectively utilizing water during dry summers, and
- a greenhouse on site for seedling starts and season extension.

> "It helps them learn about nutrition and the peaceful feeling of being connected to the land in a real and immediate way.
> - Maureen Zutz

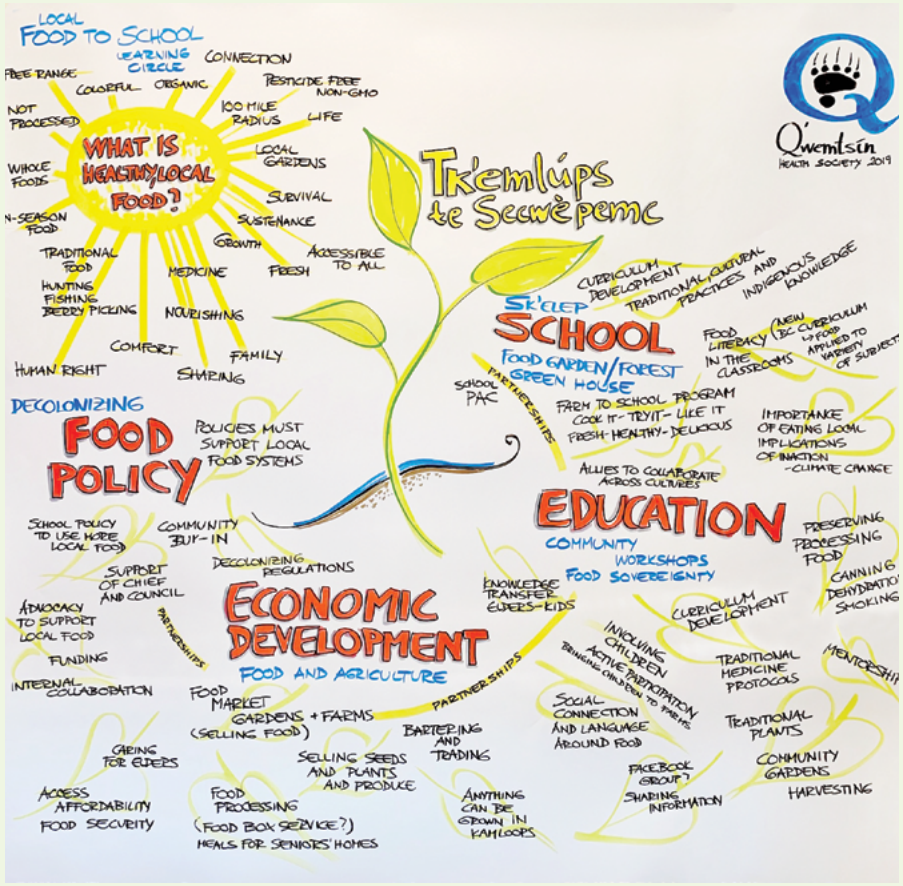
Engaging with Indigenous Plants and Pedagogy

The project's lead teachers from both schools have reported a garden-based curriculum that meets the province of BC's educational requirements leads to better student engagement. Direct supervision and clear instruction in everyday gardening tasks help to increase engagement. Both schools are incorporating cultural, artistic, linguistic, historic, scientific and mathematic lessons into how the teachers and students engage with the garden. The combined efforts to create and sustain these gardens and the hands-on learning opportunities they provide had resulted in students increasingly showing appreciation, excitement, pride and ownership of their school's garden projects.

Students are able to connect to the gardens in numerous ways, making them such an invaluable resource. Classroom based hands-on and guided instruction allow the students to learn about seed starting and planting, soil amendments, composting with worms and industrial composters, irrigation system set up, wise use of water resources, the designing and setting up of garden beds, how to attract pollinators, and general garden maintenance. Through this process they have been able to take ownership of the space, express feelings of peace in the garden, and joyfully share knowledge they have gained from their time in the garden.

Plans are in place to expand the garden infrastructure and on the following enhancements and activities:

- Building habitat for bees, birds, and bats,
- doing art and writing in the garden,
- building seats for relaxing in the garden,
- using the space for math such as measuring or learning area and perimeter,
- using the garden for science experiments,
- learning about traditional plants and their uses,
- making tea and bath bombs with herbs,
- hosting events in the garden for all community members (planning, set up etc.), and
- having peer groups and multi-grade groups cooperate to grow their individual crops within the garden.



Impact on School Community

As the projects have grown, facilitators have observed increased increased community awareness towards Indigenous Food Sovereignty within the two communities. More and more teachers are coming on board, by supporting the projects with their own knowledge and skills and engaging their students by offering learning opportunities in the garden. Students are sharing knowledge with their peers and learning valuable skills which they are taking home to share with their families. Parents and community members are supporting the work conducted by their youth and, in turn, taking it upon themselves participate in the movement. Moreover, Chief and Council are seeing the value of this good work and supporting the movement within each of their respective communities at a level and community Food Sovereignty committees are becoming more developed and their implementation is deepening, especially Sovereignty committees, especially within TteS. Finally, both communities have developed positions of employment for a school garden educator and Indigenous Food Sovereignty Liaison workers to assist in the successful continuation of these projects on a larger scale.

Learnings and Observations

Key challenges in the beginning included a lack of running water to the greenhouses and the need of a knowledgeable individual to provide guidance and expertise to make the project a success. The hiring of a Permaculture Designer was invaluable, as they helped provide technical expertise to those involved in the project. Starting small was crucial for the success, as it allowed the adults and students time to be involved and learn about the many steps of creating a successful garden at a slower pace. Local gardeners have offered helpful information related to how various plants will manage in the local area's hot and dry climate.

> **"Traditional foods are important to the community because it gets people up and out on the land, asserting our traditional rights. We have many lakes in the territory that have spring run offs of trout and every four years there will be a big sockeye run. This is beneficial to our people.**
>
> - Marshall Gonzales, Councilor for Skeetchestn Indian Band

Key Considerations

While all of the projects highlighted in this resource were developed in their own unique way there are some common best practices that should be considered when creating new land-based learning projects.

1. Build and nurture *relationships* with Indigenous partners

- Relationship building takes time. Take time to listen and build relationships before determining plans and timelines.
- Nations and Knowledge Keepers can be busy. If you are unsure who to reach out to, you could start with your School District's Indigenous Education Department or District Principal.
- Do not continue a project if it does not have support and participation from Indigenous partners.

2. Consider *local* contexts

- Land-based learning projects require thoughtful consideration of the history and context of land and place. Traditional practices and ways of knowing vary across regions, Nations, and individual experiences.
- Take the time to research other individuals or organizations that might be conducting similar work in your region. Determine what the needs and assets are in your community before venturing too deeply into planning.

3. Establish a *community*

- Foster collaboration and support for your project by bringing together members of the school and broader community. Once relationships are established, co-create goals and opportunities with community members. Broad support allows for the project to continue, even when key players move on or retire.

- Mentorship is another way to help establish a community and aid in knowledge translation between schools and between teachers with varying levels of experience.

- Not everyone may be comfortable in a garden setting. Offer an annual or seasonal garden orientation or host a community event to increase engagement from your school community and let others know that the garden is their space too.

4. Consider general garden and school food *project logistics*, including communication, budgeting and the sustainability of your garden project

- Establish consistent and mutual lines of communication between project coordinators, teachers, school district staff and community members. This is a collaborative process that paves the way for collective decision making.

- Develop a clear and reasonable budget. Account for funds to support broader school and community involvement. This might include honoraria for Indigenous partners' participation, as well as funding for teacher release time or prep time.

- Leverage initial funding sources to receive matching funds or in-kind support. Consider hiring a dedicated coordinator to apply and manage additional funding and project logistics.

- Ensure that your gardens receive adequate care throughout the school year and include a plan to maintain them over the summer. For more information about garden maintenance, visit the Farm to School BC website.

- Work with the facilities and/or grounds departments at your school district to demonstrate the value of your Indigenous plant gardens and build district support for your project. This might involve requesting the creation of new policies or agreements around Indigenous plant gardens that are different from existing garden or landscaping protocols.

5. Be *flexible* with your timeframe and project plan

- Anticipate that projects will always take longer than anticipated. Do not hold your project to a strict timeline and respect the time it takes to build relationships, community, and buy-in.

- The process is more important than the product.

- Be responsive to the needs of your community and open to new directions and opportunities. Planning, developing and implementing your project should be an iterative and collaborative process that incorporates feedback from the school and broader community partners.

6. Build *educational* components into your project

- Create interactive and educational components (e.g. plant signs, lesson plans) within the gardens to build school and community engagement.

- Work with your school district to ensure all educational materials related to your project align with the First People's Principles of Learning.

- Interactive educational components offer an opportunity for language revitalization and to foster cultural competencies and connections. Ensure the Nations are leading this process and are sharing knowledge based on their own protocols and processes. Non-Indigenous people do not own any part of Indigenous language or culture. It is not for settlers to share as the owner and cannot act as owners to this information.

Sample Budget for a Native Plant Garden

A number of factors can impact budget planning, including the goals of the program, the size of your future garden, and existing infrastructure. Below is a generic budget based loosely on a school garden that was part of the Harvest4Knowledge program. This specific garden was built on top of grass with a technique known as lasagna gardening. The garden was approximately 2,100 square feet (30ft X 70ft) with no prior fencing or irrigation infrastructure in place. With the Harvest4Knowledge project, there was a tremendous amount of community support: both financially and in-kind. Although the budget below shows a high cost of plants and compost, the school was able to receive these items by donation. If you need support refining your budget, visit Farm to School BC's budget template calculator.

CATEGORY	ITEM	APPROXIMATE COST
Plants / Seeds	Cost depends on size / age of plants, and if you start them from seeds, which is most cost efficient.	**$500 - 1000**
Small Equipment (eg. gloves, shovels, hand tools etc.)	3 shovels	**$80**
	25 sets of garden gloves (suitable for a class)	**$125**
	Buckets - for harvest and weeds collection	**$25**
	3 pruning shears (For adult volunteers primarily - scissors ideal for students)	**$80**
	bins for storage of tools, seeds, etc.	**$30**
	2 rakes	**$50**
Honoraria	For Elders, Knowledge Keepers involvement	**$400**
Workshops / Consultations	Hiring a plant specialist to assist in the design, and provide guidance during the first year can be highly beneficial.	**$500**
Space modification costs	Fencing	**$500 - 1000**
	Border edging (helps slow encroaching grasses)	**$150**
Irrigation Equipment	100 ft hose, 1 overheard sprinkler, 1 hand sprayer	**$100**
Estimated cost for signage	Wood or professional options, approx. 15-20 signs (1 per plant?)	**$150 - 400**
Cardboard Boxes (for lasagna garden)	Recommend furniture store donations (big boxes)	**$0**
Leaf Mulch	Look for donations from municipal collection	**$0**
Soil / Compost	2 - 5 yards (depending on size of garden)	**$250 - 400**
TOTAL		**$2000 - $4000**

Native Plant Resources

Considerations for selecting plants

Native plants will vary across the climates and ecosystems within BC. While native plants tend to be pest resistant and suited to their local climate, requiring less input and maintenance,, there are some key factors to consider:

- **Plant needs:** Different plants do better in different soil types and conditions, and will have varying water and shade requirements. Make sure you are familiar with the conditions of your garden, and choose plants accordingly.
- **Avoid poisonous plants:** see the Canadian Biodiversity Information Facility's List of Poisonous Plants.
- **Take time to establish:**
  - Gardens are a long term investment. Many native perennial plants may take months to establish and may not be as fast growing as non-native food crops such as cultivated tomatoes or carrots.
  - At the outset of the project, one participant in the Indigenous Foodscapes project noted that with some of the planted areas, "I felt a need to protect them. The plants are not really robust enough to bring the kids in to work with them…", but after a couple years they became more established, allowing students to explore them.
- **Harvest and bloom time:**
  - If possible, select plants whose harvest and bloom times are spread throughout the year to support year round activity in your garden.

Native plants will vary across biogeoclimatic zones - use the linked resources and talk to your local nurseries and Knowledge Keepers for support in choosing which plants may work best for your local climate and school's ecosystem!

Online and Physical Resources

The Natural Edge's Plant Database: The database allows filtering by region, type of plant, moisture level, soil conditions, and light conditions.

Native Plant Encyclopedia from Canadian Wildlife Federation: Allows one to search by plant type and region, or to search for specific plants and find information related to their fruiting and blooming season, recommended growing conditions, and habitat.

Food Plants of BC's Coastal First Peoples by Nancy Turner: A book detailing edible plants across BC by ethnobotanist Nancy Turner.

First Nations Health Authority Traditional Food Fact Sheet: includes information about the histories of use, names in different First Nations languages, and nutritional information for many traditional foods across BC.

Saanich Native Plants Resources: A wealth of resources for native plants in the Garry Oak Ecosystem on Vancouver Island.

Pacific Northwest Native Plant Knowledge Cards from Strong Nations: Features 65 different native edible and medicinal plants on cards that are useful for classroom instruction for communities in the Pacific Northwest.

Halkomelem Ethnobiology Website: Ethnobiology resources and other identification information for Southwest BC.

Native Pollinator Plant Resource: Information about twelve pollinator friendly plants to add to gardens; includes growing conditions and other benefits of the plants.

Gardening with Native Plants Resource: Includes plants specific to Vancouver Island, with overall tips for gardening with native plants.

Native Plant Nurseries

For a full list of Nurseries, see the list of **Native Plant Nurseries and Seed Suppliers in BC** from the **Native Plant Society of BC**, or the Native Plant Suppliers List in BC from the **Canadian Wildlife Federation**. The following is a non-exhaustive list of nurseries across BC that are either Indigenous-owned, run in partnership with Indigenous organizations, or support Indigenous plant projects.

Coast Salish Native Plant Nursery at Maplewood Flats

Location: Adjacent to the Səlilwətaɬ Nation community on Tsleil-Waututh and Coast Salish lands.

The nursery aims to recognize and emphasize the cultural associations of Coast Salish plants and how they can be used to improve habitat value for local wildlife. The Wild Bird Trust of BC manages Maplewood Flats conservation area and is working with Səlilwətaɬ Nation to manage priorities, and inspire the community with plant knowledge through a robust educational program. For every plant purchased, one plant is planted at the Flats.

https://wildbirdtrust.org/programs/coast-salish-plant-nursery

Environmental Youth Alliance (EYA) Native Plant Nursery

Location: Strathcona Community Gardens in Vancouver on unceded (xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) territory.

EYA engages youth facing barriers to become environmental stewards. They offer free youth-grown native plants to schools and community organizations in East Vancouver and Indigenous-led organizations across the Lower Mainland. They also sell native plants to the public each spring as a fundraiser for their youth programs. **https://eya.ca**

Nupqu Native Plant Nursery

Location: ʔaq̓am Community Lands on the territory of the Ktunaxa Nation in the Southern Interior/Kootenay Region of BC.

The nursery is 100% Aboriginal-owned and offers services such as native plants for purchase, revegetation consulting, custom seed collection, seed cleaning, seed stratification, propagation, and reclamation. The nursery only propagates native seed as this increases survival rates, increases genetic variation and biodiversity, and ultimately leads to increased environmental sustainability.

https://nupqu.com/native-plants-nursery-home

PEPÁḴEN̲ HÁUTW̲ (Blossoming Place) Native Plant Nursery and Garden

Location: at ŁÁU,WEL, N̲EW̲ Tribal School (Brentwood Bay, BC) on W̱SÁNEĆ homelands

PEPÁḴEN̲ HÁUTW̲ is a native plant nursery, garden, greenhouse, learning centre and gathering space dedicated to educating WELN̲EW̲ Tribal School students, adults and other community members about native plants and food growing. This site began as a greenhouse and since 2010 has evolved into a multi-faceted education initiative involving many contributing partners and supporters. Their website has many resources for educators that can be adapted for different local contexts and languages. **http://pepakenhautw.com**

Saanich Native Plants

Location: Coast Salish, WSÁNEĆ territory, in Saanich, Vancouver Island

Saanich Native Plants aims to inspire and empower people to restore and conserve nature by providing native plants, seeds, education, and expertise. They have built their business on the core principle of valuing nature and trying to continually work with integrity and excellence.

http://saanichnativeplants.com

Splitrock Environmental

Location: Seton River corridor, where the Sekw'el'was and T'it'qet communities of the St'at'imc are the original inhabitants, in Lillooet, BC.

Splitrock Environmental is an award-winning, Aboriginal-owned business that specializes in ecological restoration, ethnobotany and propagation of native plant species to benefit wildlife, provide traditional food values, and are adapted to regional microclimates.

http://splitrockenvironmental.ca/product-category/plants

Suwa'lkh School's Native Plant Nursery

Location: in School District 43 (Coquitlam) on the unceded traditional territory of the Kwikwetlem First Nation, which lies within the shared territories of the səlilwətaɬ (Tsleil-Waututh), Katzie, (xʷməθkʷəy̓əm (Musqueam), Qayqayt, Sḵwx̱wú7mesh (Squamish), and Sto:lo Nations.

The program, a partnership between Fresh Roots and SD43, was started as a way to reconnect urban Indigenous youth to nature and their cultural practices. The nursery on school grounds sells native plants grown by students as a fundraiser for their programming.

https://freshroots.ca/suwalkh

Twin Sisters Native Plant Nursery

Location: Moberly Lake on the territory of the Saulteau and West Moberly First Nations (near Fort St. John) in the Peace River Regional District.

The nursery is run in partnership between Saulteau First Nations and West Moberly First Nations. The nursery "is dedicated to restoring the earth's ecological balance for the benefit of all creation."

https://www.twinsistersnursery.com

Farm to School BC Land-Based Learning Activities:

Overview and Curricular Connections

Curricular Connections

Indigenous knowledge and perspectives are now found throughout the BC's New Curriculum from kindergarten to grade 12, both implicitly and explicitly. Documents with references to Indigenous Knowledge and Perspectives in K-12 Curriculum can be found by subject on the BC's Curriculum website, as well as links to Indigenous Education Resources, including FNESC Authentic First Peoples Resources. FNESC also has several resources including FNESC/FNSA In Our Own Words – Bringing Authentic First Peoples Content to the K-3 Classroom, FNESC/FNSA Science First Peoples Secondary Teacher Resource Guide and FNESC/FNSA Science First Peoples Grades 5-9 Teacher Resource Guide that provide land and place based cross-curricular lessons/activities.

There are many opportunities to explore the BC First Peoples Principles of Learning in your lessons. When the curriculum includes content that encourages a connection to place, it is an opportunity to connect to Indigenous history or ways of knowing. The list to the right offers some examples of K-12 curricular connections to food-based Indigenous lessons. Note that this list is not exhaustive; extension activities could also be included in ADST (food studies), Math (counting, measuring), and Science (experiments). Visit the On the Land section on the Curriculum Connections page on the Farm to School BC website for more.

ADST	**Applied Design:** Understanding context, Defining, Ideating, Prototyping, Testing, Making, Sharing (6-9)
Arts	**Visual arts:** Elements of design: line, shape, space, texture, colour, form (visual arts); principles of design: pattern, repetition, balance, contrast, emphasis, rhythm (visual arts), variety (K-8) **Grade 4:** Traditional and contemporary Aboriginal arts and arts-making processes
ELA	**Kindergarten:** Explore oral storytelling processes **Grade 3:** Develop awareness of how story in First Peoples cultures connects people to land **Grade 9:** Recognize the influence of place in First Peoples and other Canadian texts
PHE	Healthy and active living (K-12)
Social Studies	**Grade 2:** Diverse characteristics of communities and cultures in Canada and around the world, including at least one Canadian First Peoples community and culture **Grade 5:** First Peoples land ownership and use **Grade 7:** Social, political, legal, governmental, and economic systems and structures, including at least one indigenous to the Americas **BC First Peoples, Grade 12:** Traditional territories of the B.C. First Nations and relationships with the land
Science	**Questioning and predicting:** Demonstrate curiosity about the natural world; Observe objects and events in familiar contexts (K-9) **Processing and analyzing data and information:** Experience and interpret the local environment; Identify First Peoples perspectives and knowledge as sources of information (K-9)

Lesson Plans:

These lessons have been taught by educators from all over BC and may need to be adapted for your own regional traditions, plants and animals, and stories. Each lesson includes the background of the educator, and their connection to Indigenous school programs. Each lesson also has information about language resources and a traditional story from the ancestral territory on which the lesson originated. By highlighting the language and stories of different Nations we celebrate the long history of the Indigenous people in BC. Connect with your school's Indigenous Education Coordinator for more information on your local Nation's stories/language if desired.

The lesson plans each contain relevant curricular connections; see the table above for more ideas. The five lesson plans are:

1. **Acknowledging the Territory**
2. **Observing and Engaging in the Garden**
3. **Planning the School Garden**
4. **Native Plant Walk**
5. **Plant Signage**

Acknowledging the Territory

LEARNING ACTIVITY #1: Write a Class Territory Acknowledgement

Overview	Students will spend time collaboratively writing a territory acknowledgement. This lesson would likely be part of ongoing conversations about how to tend and relate to the land, and how to acknowledge the traditional territory in a meaningful way.
Materials	• Access to these maps: First Peoples' Map of BC, BC Assembly of First Nations, or Native Land • Story from your local Nation • Chromebooks • Whiteboard • Paper, pencils
Time	45 minutes

As a class, discuss some of the following ideas; this discussion could be done inside your classroom or outside in a circle after a walk together.

1. **What is the traditional territory of the land we are on?** Find out the history of the people who have lived on the land since time immemorial with these maps: First Peoples' Map of BC, BC Assembly of First Nations, or Native Land.

2. **Share a story** from the Nation whose land you are on. Connect with your school's Indigenous Education Coordinator for more information if necessary.

3. **Unpack a territory acknowledgement.** According to the First Nations Education Steering Committee (FNESC), "An acknowledgment is an act of respect of local First Nations and their traditional territories. It is a recognition of their presence on the land in the past, present and future."
   a. Look at your local school district website for an acknowledgment.
   b. Unpack unfamiliar words, decide which ones resonate with your students, and brainstorm any important ideas to include.
   c. Research any relevant history of the Nation. Review several examples. Here is an example of an acknowledgement from Delta School District.

4. **Create an acknowledgement with your class.**
   a. Review several examples to establish the format and the key ideas in a standard acknowledgement.
   b. As a class or in small groups, have students draft their own acknowledgements.
   c. As a class, find the important, common components.
   d. Combine them to develop one as a class.

5. **Display** the final territory acknowledgement inside your classroom!

SEASONALITY:

This lesson can be done at any time of year, but having this conversation at the beginning of the school year or garden season is recommended to ground and contextualize future activities.

Additional Resources about Territory Acknowledgements:

1. For more information about what goes into a territory acknowledgement, Native-Land has a wonderful resource page.
2. FNESC has created a BC First Nations Land, Title, and Governance Teacher Resource Guide, which includes an introduction to help "[facilitate] the respectful and meaningful inclusion of Indigenous knowledge and perspectives in the classroom."
3. Check out the BCTF article: "The art and heart of land acknowledgments" by Carol Arnold.

CREDITS

This lesson was developed by Addie de Candole. Addie is a teacher and works for Farm to School BC/PHABC. She is a third generation settler of European and South American ancestry and was involved with the Skeetchestn Community Food Forest at its inception as the Kamloops Community Animator. She resides on the traditional and unceded territory of the Secwepemc Nation.

Acknowledging the Territory

LEARNING ACTIVITY #2: Sharing the Territory Acknowledgement

Overview	Students will spend time brainstorming how to bring the class' territory acknowledgement into a garden or outdoor space. This lesson would likely be part of ongoing conversations about how to tend and relate to the land.
Materials	• Stones or rocks • Poster paper, markers, paper, pencil crayons, laminator, etc.
Time	45 minutes

SEASONALITY:

This lesson can be done at any time of year, but having this conversation at the beginning of the school year or garden season is recommended to ground and contextualize future activities.

1. **Share the Territory Acknowledgment in a hands-on way.** A territory acknowledgement is one way to demonstrate respect for the history of the land, and the peoples who cared for this land. Using the acknowledgement that was developed as a class, any information that was gathered, and any special conversations that were had, brainstorm how to share the acknowledgment.

2. **Activities to create in the outdoor space/ garden:**
   a. Painted stepping or decorative stones.
   b. Drawings of important historical events or information displayed in the garden.
   c. One large sign as you enter the space and/or several signs of important Indigenous plants (see Lesson #5).

Additional Resources about Territory Acknowledgements:

There are many more gardening ideas in FNESC's resource, In Our Own Words – Bringing Authentic First Peoples Content to the K-3 Classroom, specifically Unit 2: Gifts from the Earth (p. 51-76).

Curricular Connections

The K-12 curricular connections listed below are not exhaustive, but reflect the main subject areas that align with this lesson. Extension activities could also be included in PHE (healthy living), Math (counting, measuring), ADST (food studies), and Science (plant growth, experiments).

Arts	**Visual arts:** Elements of design: line, shape, space, texture, colour, form (visual arts); principles of design: pattern, repetition, balance, contrast, emphasis, rhythm (visual arts), variety (K-8) **Grade 4:** Traditional and contemporary Aboriginal arts and arts-making processes
ELA	**Kindergarten:** Explore oral storytelling processes **Grade 3:** Develop awareness of how story in First Peoples cultures connects people to land **Grade 9:** Recognize the influence of place in First Peoples and other Canadian texts
Social Studies	**Grade 2:** Diverse characteristics of communities and cultures in Canada and around the world, including at least one Canadian First Peoples community and culture **Grade 5:** First Peoples land ownership and use **Grade 7:** Social, political, legal, governmental, and economic systems and structures, including at least one indigenous to the Americas **BC First Peoples, Grade 12:** Traditional territories of the B.C. First Nations and relationships with the land

Observing and Engaging in the Garden

LEARNING ACTIVITY #1: Sense and Observe the Garden

Overview	Students will spend time in the garden/outdoor space, being mindful, present, and focusing on using all of their senses.
Materials	• Journals, pencils (optional)
Time	20 minutes

1. **Introduce** the idea of mindfulness (additional activities in Mindfulness in the Garden, UBC). Remind students that when they go outside, they are doing so quietly, and thoughtfully. Gather the class to go outside.

2. **Engage** by having students quietly stand around the garden space, spread out from each other but close enough to hear you. You can say something along the lines of, "We will be using all of our five senses to be in the garden today. Ask yourself, "What am I seeing, hearing, smelling, touching, tasting [remind students what is safe to eat, or offer samples if they would like]?" Listen quietly, feel free to close your eyes if you are comfortable." Instruct students to sit or stand for 2-5 minutes quietly. Then ask students to share what they saw, heard, smelled, touched, or tasted. Dig deeper, "Where did you feel the senses in your body? Did you feel any emotions? Did it remind you of anything?"

3. **Discuss** by asking the students, "What sights, sounds, and smells would you expect to be in the garden, but are not here right now? Why?" Discuss what elements were missing, e.g. certain birds, wind, sunlight.

4. **Extension -** Students could find a spot to sit, and in their journals, draw a picture or write about what they sensed.

This lesson was originally taught on the traditional and unceded land of the Secwepemc Nation, and the language and story shared here are from these people. By highlighting the language and stories of different Nations, we celebrate the long history and current relationships with the Indigenous people in BC. Connect with your school's Indigenous Education Coordinator for more information on your local Nation's stories/language if desired.

LANGUAGE: To incorporate language into the lesson, visit the Secwepemc language page on First Voices.

STORY: How the Animal People Stole Fire, from the SD73 Secwepemc Resource page.

SEASONALITY:

This lesson would be very effective in the Spring before the garden is planted to begin crop planning conversations. If you do not have access to a school garden, these activities can be adapted to other outdoor classrooms or spaces such as nearby forests, fields, or meadows.

CREDITS

This lesson was developed by Shelaigh Garson and Maureen Zutz.

Shelaigh Garson is a Permaculture Educator. She is a 5th generation settler of mixed European ancestry and was involved with the Skeetchestn Community Food Forest at its inception as the Indigenous Food Sovereignty School Garden Liaison.

Maureen Zutz is a teacher at Skeetchestn Community School. She is a 15th generation settler on her mother's side and a 1st generation settler on her father's side, and is of Scottish, French and English ancestry. She has been working at the school and the garden since 2013.

They both reside on the traditional and unceded territory of the Secwepemc Nation.

Observing and Engaging in the Garden

LEARNING ACTIVITY #2: Interact with the Garden

Overview	Students will consider the impacts of sun, water, wind, and other elements in the garden. This could be a continuation of the Learning Activity #1, or done on another day.
Materials	• Paper, pencils, clipboards for each student • Large paper taped up, marker
Time	45-60 minutes

SEASONALITY:

This lesson would be very effective in the Spring before the garden is planted, to begin crop planning conversations. If you do not have access to a school garden, these activities can be adapted to other outdoor classrooms or spaces such as nearby forests, fields, or meadows.

1. **Introduce** impacts of sunlight, shade, and water on plant needs.
2. **Discuss** while standing in the garden, and brainstorm as a class how these different components are impacting your school garden and the plants growing in it.
   a. **Sun:** Encourage students to feel the sun on their face, where is it in the sky? Where would it be at noon on a day in July? What about in December?
   b. **Water:** Encourage the students to walk around the garden, and notice where is the water pooling? What beds are wet? Where is there water access in this space?
   c. **Wind:** Is it windy today? Where does the wind usually come from here? Is the wind usually cold or warm when it comes from different directions? What might that do to the plants in the garden?
3. **Engage** in small groups - Students work in small groups to create a map of the garden. Here are the layers for students to map out (based on these six important garden planning maps):
   a. **Sun paths:** Where is the sun? Where is it in July? Where is it in December?
   b. **Sun access on the space:** Are certain areas shady all year?

Interact with the Garden

c. **Water access, pooling, drainage:** Is the soil in the beds frozen, wet, dry? Where is the water source?
d. **Physical infrastructure in the garden:** (e.g. garden beds, shed, irrigation, fencing)
e. **Wildlife in the garden:** Does any wildlife travel through the space? What animals interact with it?

4. **Discuss -** Back together as a class, combine the physical attributes of the garden onto a large piece of paper with all of the layers (a-e above). The individual papers could be taped onto the large paper, or the garden map redrawn.

5. **Reflect -** Do we need to make any changes to the garden layout? What do we need to think about when we plant our crops?

Additional Garden Activities

1. Find an item in the growing space - what is its role in that ecosystem?
2. Create pencil rubbings of different objects (e.g. tree bark, rocks, leaves) - can you guess the object? How do the textures and patterns of plants differ?
3. There are many more gardening ideas in FNESC's resource, In Our Own Words – Bringing Authentic First Peoples Content to the K-3 Classroom, specifically Unit 2: Gifts from the Earth (p. 51-76).

Curricular Connections

The K-12 curricular connections listed below are not exhaustive, but reflect the main subject areas that align with this lesson. Extension activities could also be included in PHE (healthy living), Math (counting, measuring), ADST (food studies), and Art (visual representations like drawings).

ELA	**Kindergarten:** Explore oral storytelling processes **Grade 3:** Develop awareness of how story in First Peoples cultures connects people to land **Grade 9:** Recognize the influence of place in First Peoples and other Canadian texts
Social Studies	**Questioning and predicting:** Demonstrate curiosity about the natural world; Observe objects and events in familiar contexts (K-9) **Processing and analyzing data and information:** Experience and interpret the local environment; Identify First Peoples perspectives and knowledge as sources of information (K-9)

Planning the School Garden

LEARNING ACTIVITY #1: Garden Planning

Overview	Students will brainstorm as a class what plants to grow, who to share the produce with, and how to teach each other about crops. Local Elders and Knowledge Keepers could be interviewed or invited as guest speakers.
Materials	Garden Planning tools may include computers, paper, pencils, posters, etc. There is a lot of flexibility in these activities.
Time	15 minutes. This activity could be framed as one class-wide discussion, or happen over a longer time frame that involves small groups conducting research and sharing with the class.

SEASONALITY:

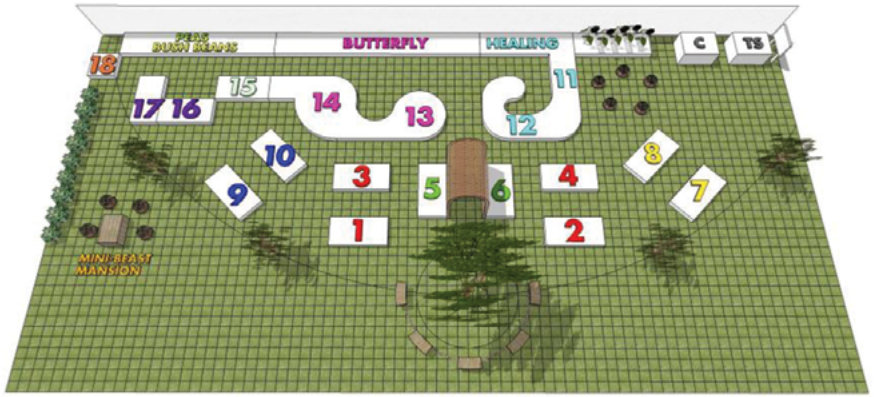
This lesson would be very effective in the late winter or early spring, before the garden is planted; this activity is focused on crop planning in a school garden.

1. **As a class, discuss the following:**
   Who will use the garden? Who will eat the food? Can we grow excess and give back to our community or Elders? How can we show our respect for the land, food and medicine that we produce?

2. **Decide what crops and traditional plans should be grown.**
   a. Are there important traditional plants we can grow? What other plants are native to this area? See Native Plant Resources section for more information.
   b. Which edible native plants could we plant? Which are used for food, and which for medicine? What are some other plants that have other uses (like feeding pollinators, ecosystem services, etc)?
   c. What non-Indigenous crops can we grow here?
   d. Which plants grow well together (companion plants) or are complementary in their uses?

3. **Create individual plant signs for traditional plants, or one large sign to inform people about the space and its plants (see Lesson #5).**

4. **Create a list of plants** to grow that would work well given the space, infrastructure and ecosystem that exists (connect to Lesson #2). In your list, include crops, native, and culturally-significant Indigenous plants, any supplies needed, budget considerations, etc.



NOTE: The teacher should have a clear idea of what the garden budget is, supplies on hand, and an action plan for garden maintenance (during the school year and the summer). Seedlings can be purchased to plant directly into the garden space. Refer to Farm to School BC's School Crop Planning Guide for crops to grow during the school year.

LEARNING ACTIVITY #2:

Garden Planning

Curricular Connections

The K-12 curricular connections listed below are not exhaustive, but reflect the main subject areas that align with this lesson. Extension activities could also be included in PHE (healthy living), Math (counting, measuring), ADST (food studies), Art (visual representations like drawings), and Science (plant growth, experiments).

ADST	**6-9:** Applied Design - Understanding context, Ideating, Sharing
ELA	**Kindergarten:** Explore oral storytelling processes **Grade 3:** Develop awareness of how story in First Peoples cultures connects people to land **Grade 9:** Recognize the influence of place in First Peoples and other Canadian texts
Social Studies	**Grade 2:** Diverse characteristics of communities and cultures in Canada and around the world, including at least one Canadian First Peoples community and culture **Grade 5:** First Peoples land ownership and use **Grade 7:** Social, political, legal, governmental, and economic systems and structures, including at least one indigenous to the Americas **BC First Peoples, Grade 12:** Traditional territories of the B.C. First Nations and relationships with the land
Science	**Questioning and predicting:** Demonstrate curiosity about the natural world; Observe objects and events in familiar contexts (K-9) **Processing and analyzing data and information:** Experience and interpret the local environment; Identify First Peoples perspectives and knowledge as sources of information (K-9)

CREDITS

This lesson was developed by Shelaigh Garson and Maureen Zutz.

Shelaigh Garson is a Permaculture Educator. She is a 5th generation settler of mixed European ancestry and was involved with the Skeetchestn Community Food Forest at its inception as the Indigenous Food Sovereignty School Garden Liaison.

Maureen Zutz is a teacher at Skeetchestn Community School. She is a 15th generation settler on her mother's side and a 1st generation settler on her father's side, and is of Scottish, French and English ancestry. She has been working at the school and the garden since 2013.

They both reside on the traditional and unceded territory of the Secwepemc Nation.

This lesson was originally taught on the traditional and unceded land of the Secwepemc Nation, and the language and story shared here are from these people. By highlighting the language and stories of different Nations, we celebrate the long history and current relationships with the Indigenous people in BC. Connect with your school's Indigenous Education Coordinator for more information on your local Nation's stories/language if desired.

LANGUAGE: To incorporate language into the lesson, visit the Secwepemc language page on First Voices.

STORY: To hear the story of Coyote and Crow, listen to this video (to 3:32), and perhaps incorporate making bannock with your class too.

Native Plant Walk

LEARNING ACTIVITY #1: Native Plant Walk

Overview	Students will spend time walking around the school yard or nearby forest, field, or river, learning and thinking about the plants and animals they find. The students are invited to engage with their senses, listening to birds, smelling the flowers, touching plants, tasting samples listed below, and witnessing their environment (OWL: Observe, Witness, Listen).
Materials	• Basket, scissors • Journals, pencils (optional) • Preserved foods, i.e. wild berry jam (optional) • Yarrow skin salve (optional)
Time	60 minutes

SEASONALITY:

This lesson can be done at any time of year, though the Spring and Fall would allow for more plants to be examined as their leaves, flowers, and perhaps fruits may be available.

1. **Opening** (15 minutes): Acknowledge the traditional territory of the land you are on. Sit with the students in a circle. This could be done inside or outside.
   a. **Optional:** Share one of the stories listed on page 45 from the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Nations.
   b. **Introduce yourself and personal history** of where your family comes from. Invite students to respond to the following questions:
      i. Where are you and your ancestors from? What is your connection to the land?
      ii. Highlight the diversity of cultures and people within the school community. Note how the diversity makes our classroom rich, and mirrors the diversity we will witness within different plants and animals.
   c. **Introduce the topic of seven generations:**
      i. Are you familiar with the Seventh Generation Principle? "In our every deliberation, we must consider the impact of our decisions on the next seven generations." More information on the Seventh Generation Principle.
      ii. Our actions have had many impacts, and we want future generations to have the plants and animals and world that we do now, so we must protect the land.
   d. **Inquire about past experiences:**
      i. What plants do you know? Have you ever eaten a wild plant?
      ii. Have you ever seen a wild animal? How did it make you feel?
      iii. How can we be good guests on this land? How can we protect wild spaces so other species can live?
   e. **Introduce the language (if using):**
      i. When we go into the outdoor space, we will be naming the plants and animals that we see both in English and in the native language to the First Nations here (optional), but there is more richness to the creatures than just their names (for more on this, see Braiding Sweetgrass by Robin Wall Kimmerer). Optional: Connect to your school's Indigenous Education worker or local Elder for more language options.
   b. **Themes to consider, the 5 R's:**
      i. ***Respect*** for the environment, including each other
      ii. ***Responsibility*** of this ***Relationship*** through the practice of ***Reciprocity***
      iii. ***Reverence*** to be grateful

2. **In the outdoor space** (35 minutes):
   a. **Guidelines:** This is a time to invite sensory experiences, and students can use all of their senses in this learning experience.
   b. **Samples (optional):** If there are berry plants, share some wildberry jam so students can taste what will be growing there (if it is the same berry). If there is yarrow growing, share the skin salve made from it.
   c. **Discussion prompts:** Use the following prompts to guide discussion based on what you see outside in your school yard or nearby forest, field, or river. Pick and choose the following prompts based on your local context and experience.:

LEARNING ACTIVITY #1: Native Plant Walk

i. **Indigenous plants (for south-coastal regions):** How were/are the Indigenous peoples in this place in relationship with these plants? When and how were they grown and harvested?
   1. **Berries:** There are 23 different coastal berries including Salmonberry, Thimble Berry, and Oregon Grape. Do any of these grow here?
   2. **Edible plants:** What other native edible plants do you know? Do you think any of these are here?
   3. **Crafting:** Some plants can be grown and then crafted into other items and offered as gifts or for trade. Do you know of any of these plants and what they could be crafted into? (ie cedar, tobacco, depending on the local Nation's customs)

ii. **Pesticides and herbicides:** What happens when we remove native plants using chemicals? How might it affect other creatures like the birds and insects who eat it?

iii. **Insects:** Insects are a sign of a healthy environment. What evidence do we see that insects are here? How can we be good stewards and foster healthy ecosystems? For example, planting yarrow (a biocontrol plant) or nasturtiums (that are food for aphids). Birds, bats, and dragonflies eat insects, and butterflies need hosting and nectar plants (Pollinator Curriculum).

iv. **Interconnectedness:** Everything that we do has an impact on the earth. It is all about creating relationships. Taking care of our own bodies is also part of taking care of the environment. For example, being outside like we are now is good for your mental health. What other ways can you think of that help connect you to the land? For example, swimming in the ocean, witnessing the night sky, walking the land in your bare feet, or watching the clouds pass by.

3. **Closing reflection, gathering class in a circle** (10 minutes):
   a. How can you leave a small ecological footprint? What different choices can you make that can help our plant and animal friends?
   b. What plants did we see today? What insects did we see today? What birds did we hear today?
   c. What did you learn today? What do you want to learn more about?
   d. Share what you learned today as the teacher, demonstrating that adults are always learning too.

Additional Garden Activities

Other hands-on ways to build relationships between the students and plants (other than eating them):

- Make a herbarium (see page 159 in FNESC/FNSA Secondary Science First Peoples Teacher Resource Guide)
- Making crafts with harvested plants (i.e. plants rubbings, collages, pressing leaves and flowers)
- Using plants as weaving materials (i.e. English Ivy or making Pine Needle baskets)
- School Garden themed beds:
  - Weaving plants (Traditional Aboriginal Weaving with Wool and Plant Materials: Artists in the Classroom)
  - Sensory garden (Creating a Sensory Garden)
  - Fruits and vegetables (Farm to School BC School Garden Crop Planning Guide)
  - Indigenous medicinal and food plants (*Food Plants of Coastal First Peoples* by Nancy J. Turner)
  - Dyes (weaving and dye cards and video under the May 29 - Coast Salish Weaving with Candace Crockford post)
- Culinary herbs (Farm to School BC School Garden Crop Planning Guide)
- Butterfly gardens (Lower Mainland - Selecting Plants for Pollinators)
- Tea-making garden (Surrey school district tea-making recipes)

LEARNING ACTIVITY #1: Native Plant Walk

Curricular Connections

The K-12 curricular connections listed below are not exhaustive, but reflect the main subject areas that align with this lesson. Extension activities could also be included in Math (counting, measuring), ADST (food studies), Art (visual representations like drawings), and Science (plant growth, experiments).

ELA	**Kindergarten:** Explore oral storytelling processes **Grade 3:** Develop awareness of how story in First Peoples cultures connects people to land **Grade 9:** Recognize the influence of place in First Peoples and other Canadian texts
PHE	Healthy and active living (K-12)
Social Studies	**Grade 2:** Diverse characteristics of communities and cultures in Canada and around the world, including at least one Canadian First Peoples community and culture **Grade 5:** First Peoples land ownership and use **Grade 7:** Social, political, legal, governmental, and economic systems and structures, including at least one indigenous to the Americas **BC First Peoples, Grade 12:** Traditional territories of the B.C. First Nations and relationships with the land
Science	**Questioning and predicting:** Demonstrate curiosity about the natural world; Observe objects and events in familiar contexts (K-9) **Processing and analyzing data and information:** Experience and interpret the local environment; Identify First Peoples perspectives and knowledge as sources of information (K-9)

CREDITS

This lesson was developed by Lori Snyder, a Metis Herbalist and Educator, who is a refugee of the Red River Metis Nation and was born and raised on the Coast Salish lands. She co-coordinated the Indigenous Foodscapes project from 2017-2019.

Lori resides on the traditional and unceded territories of the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Nations.

This lesson was originally taught on the traditional and unceded land of the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Nations, and the language and story shared here are from these people. By highlighting the language and stories of different Nations, we celebrate the long history and current relationships with the Indigenous people in BC. Connect with your school's Indigenous Education Coordinator for more information if necessary.

xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Languages: To incorporate language into the lesson, here are several language resources: Sḵwx̱wú7mesh Sníchim language, hən̓q̓əmin̓əm̓ Alphabet, Squamish Atlas, North Shore Culture Compass, and a map of First Nations Languages of BC.

xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilwətaɬ (Tsleil-Waututh) Stories:

1. xʷməθkʷəy̓əm (Musqueam): This is the story of the Cedar tree. More stories and resources from the xʷməθkʷəy̓əm (Musqueam) Nation.
2. Sḵwx̱wú7mesh (Squamish): The Two-Headed Serpent: A Story from the Squamish Nation
3. səlilwətaɬ (Tsleil-Waututh): Legend of the Wolf story by Dan George

Plant Signage

LEARNING ACTIVITY #1: Research Indigenous Plant Names

Overview	Students will collect the names of plants in the outdoor space and research their Indigenous names. It is important to consider that most common names for Indigenous plants are have been named by western botanists. As opposed to naming places or plants after the person who "discovered" them, First Nations place and plant names are based on the teachings and personalities within. Since we are working with plants that are Indigenous to your territory, you may want to reach out to the local Nations and see if they would like to provide the native names for the plants. Should you go this route, please consider offering an honorarium for their time.
Materials	• Paper and pencils • Chromebooks • Shared slideshow or worksheets to collect research information • Indigenous plant books (e.g. Food Plants of Coastal First Peoples by Nancy J. Turner), websites, or other resources
Time	2 x 45 minute classes

Class 1

1. **Opening:** Acknowledge the territory you are on, share some important plants of the area, and some of their key uses. The Indigenous plant section has further information about this or there are some on the Royal BC Museum page.

2. **List the Plants:** In small groups, have students log all of the plants that will be given signs in the outdoor space, whether that is in a school garden, school forest, nearby natural area or city park. Ensure appropriate permissions are in place where the signs will be installed, especially if they are installed off school property.

Class 2

3. **Research Indigenous names :** In small groups, students will research the traditional name (with the correct spelling and perhaps pronunciation hints), traditional use, western name of each plant, and images of each plant. Contact your Indigenous Education Department to assist in this process.

4. **Create a master list** of all of the plants, perhaps in a shared presentation. Print out individual sheets with Indigenous name, pronunciation, Western name, and a photo of the plant.

SEASONALITY:

This lesson can be done at any time of year, though completing these in the fall or winter to be ready for the spring would be ideal, as you can incorporate your planning into the process.

CONTEXT:

In many ways signs brings the garden to life, and greatly increases participation and comfort for those engaging with the garden. People who normally feel out of place in the garden suddenly have ways to connect with the plants by becoming familiar with their name and potentially other information that is mentioned in the signage. Additionally, creating signs in the garden is a wonderful way to engage students and help them build a positive relationship with the garden space and the school in general. This can support them to become stewards and caretakers for this place.

CREDITS

This lesson was inspired by the Harvest4Knowledge project and was developed by Marcus Lobb. Marcus works for Farm to School BC/PHABC. He is a sixth generation settler of European ancestry and has been involved with the Harvest4Knowledge Project as the Capital Region Community Animator since 2019.

He resides on the traditional homeland of the Lekwungen people, now known as the Songhees and Esquimalt Nations of South Vancouver Island.

LEARNING ACTIVITY #1: Research Indigenous Plant Names

This lesson was originally taught on the traditional and unceded land of the Songhees and Esquimalt (Lekwungen) Nations, and the language and story shared here are from these people. By highlighting the language and stories of different Nations, we celebrate the long history and current relationships with the Indigenous people in what is now known as BC. Connect with your school's Indigenous Education Coordinator for more information if necessary.

Lekwungen Language: To incorporate language into the lesson, the Songhees Nation has more information on their website about their həlitxʷ tθə ləkʷəni?nən - Bringing ləkʷəni?nən Back to Life program.

Lekwungen Story: Place to Smoke Herring Video

Plant Signage

LEARNING ACTIVITY #2: Painting

Overview	Students will paint the garden signs.
Materials	• Indigenous plant list: Can be offered as a shared presentation, or cards for each, along with a document camera to project the image • Each individual sheet should include an Indigenous name, pronunciation, Western name, and photo/drawing of the plant. Preparation: • 1" X 6" wood planks (8 foot lengths = 8 signs) • 1" X 2" wood stakes (8 foot length = 4 posts) • Outdoor white paint • Wood stain: Linseed Oil, Tung Oil, Hemp Oil In Class: • Colorful acrylic paints • Paint brushes or rollers and containers • An alternative to painting the wooden signs, paper could also be used and laminated, then stapled to the wooden posts.
Time	30 minute class, teacher preparation time before and after the class

SEASONALITY:

This lesson can be done at any time of year, though completing these in the fall or winter to be ready for the spring would be ideal, as you can incorporate your planning into the process.

Before the Class (Teacher):

- Pre-cut the sign portion in 12 inch pieces (allows for 8 signs per 8 foot length of wood) and paint them with an outdoor white paint. Allow to dry for 24 hours. You should cut and paint enough for the needs of your garden, and consider the number of students in your class - pairing students may be required.
- Paint the full 8ft length of the posts white. (The students will then cut these posts into individual 2ft length posts in the next step of the lesson). The purpose of painting the signs is durability but it also creates a bright background for the plant names to be painted on - making them more visible.
- Before class, set out all of the painting supplies that will be needed.

During Class:

1. **Introduce the Indigenous plant list:** As a class, review each card and practice the pronunciation together, repeating after you. Review the cards with a document camera or a presentation so students can see the words and plant photos.

2. **Engage: Paint Signs**
   a. Clearly explain what should be included on each plant sign. Write it on the board.
   b. Hand out the plant names to each student (or pair of students depending on the number of signs being made).
   c. **Wooden signs:** Carefully write the Indigenous name (and western name if desired) for the plants on the sign. Using colorful paints, have the students paint their signs and allow them to dry for 24 hours. You may also want to paint an image of the plant if space allows.
   d. **Paper signs:** If laminating any signs, students can handwrite or type and print the information to include on the sign.

After the Class (Teacher):

- Paint a clear acrylic varnish on the signs to protect them from the rain. Use a garden friendly stain, as listed above in the materials list, and allow 24 hours to dry.

LEARNING ACTIVITY #2: Painting

This lesson was originally taught on the traditional and unceded land of the Songhees and Esquimalt (Lekwungen) Nations, and the language and story shared here are from these people. By highlighting the language and stories of different Nations, we celebrate the long history and current relationships with the Indigenous people in what is now known as BC. Connect with your school's Indigenous Education Coordinator for more information if necessary.

Lekwungen Language: To incorporate language into the lesson, the Songhees Nation has more information on their website about their həlitxʷ tθə ləkʷəni?nən - Bringing ləkʷəni?nən Back to Life program.

Lekwungen Story: Place to Smoke Herring Video

Plant Signage

LEARNING ACTIVITY #3: Signage Construction

Overview	In this lesson, students will assemble the signs from Learning Activity 2. Recommended age for this part of the lesson is Grade 5 and up.
Materials	• Screws (1.5 inch decking) • Drills with square bit and Screwdrivers with square bit • Hand saw • Measuring tape • Rubber mallet • Several adult helpers
Time	45 minutes

SEASONALITY:

This lesson can be done at any time of year, though completing these in the fall or winter to be ready for the spring would be ideal, as you can incorporate your planning into the process.

1. **Introduction:** Review the plant names.

2. **Review activities at each station** (see below for descriptions).

3. **Construct Posts and Sign Drilling:**
   a. **Station 1: Cut Posts**
      i. With two or more adult supervisors, explain the process of safe cutting and drilling to the students by demonstrating how to cut and how to drill. Emphasize how we never look up when we are cutting, and we always are in a safe spot for cutting.
      ii. Line students up and have them each cut their post. Posts should be at least 2 feet in length, but based on the length of the piece you purchase from the store you can improvise a little to get the most out of each length, and avoid leftover pieces. An 8 foot piece of 1X2 will give you 5 posts, at about 19 inches. When cutting the posts, the teacher will need to apply pressure to the end they are not cutting to avoid movement of the post. Clamps or simply sitting on the posts can do the trick.

   b. **Station 2: Drilling Sign onto post**
      i. Once the students have cut their posts they can move on to learning about drilling. Showing them both how to screw in with a screwdriver and an electric drill is a fun activity.

      ii. Attach two screws through the post first, spaced about 3 inches from each other. Always allow an inch of post to be above the top of the sign, so you can hammer the post into the ground and not knock the sign off!

4. **Set up the signs in the garden:**
   a. With a mallet or hammer, pound the stakes into the garden.

   b. Reflect on the learning by sitting in a circle outside: encourage each student to share what they have learned through this process and their favorite Indigenous plant name.

***NOTE:* Stations and Adult Supervision** Using tools with students can be one of the most exciting parts of having a garden, however care must be taken to ensure the safety of all involved. Multiple adults are required to offer this activity in a safe way. Typically setting up stations for cutting and drilling with an adult at each is mandatory. The more adults and tools you have results in more stations, and students moving through the activity quicker. In general it will take 2-3 minutes per student per construction station. Someone will need to apply pressure to the post while the students cut, involve the one who just cut to support the next up, and for them to give the safety tips - peer to peer.

LEARNING ACTIVITY #3: Signage Construction

Curricular Connections

The K-12 curricular connections listed below are not exhaustive, but reflect the main subject areas that align with this lesson. Extension activities could also be included in Math (counting, measuring), ADST (food studies), Art (visual representations like drawings), and Science (plant growth, experiments).

ADST	Applied Design, Skills, and Technologies **6-9:** Woodwork
Arts	**Visual arts:** Elements of design: line, shape, space, texture, colour, form (visual arts); principles of design: pattern, repetition, balance, contrast, emphasis, rhythm (visual arts), variety (K-8)
ELA	**Kindergarten:** Explore oral storytelling processes **Grade 3:** Develop awareness of how story in First Peoples cultures connects people to land **Grade 9:** Recognize the influence of place in First Peoples and other Canadian texts
PHE	Healthy and active living (K-12)
Science	**Questioning and predicting:** Demonstrate curiosity about the natural world; Observe objects and events in familiar contexts (K-9) **Processing and analyzing data and information:** Experience and interpret the local environment; Identify First Peoples perspectives and knowledge as sources of information (K-9)

This lesson was originally taught on the traditional and unceded land of the Songhees and Esquimalt (Lekwungen) Nations, and the language and story shared here are from these people. By highlighting the language and stories of different Nations, we celebrate the long history and current relationships with the Indigenous people in what is now known as BC. Connect with your school's Indigenous Education Coordinator for more information if necessary.

Lekwungen Language: To incorporate language into the lesson, the Songhees Nation has more information on their website about their həlitxʷ tθə ləkʷəni?nən - Bringing ləkʷəni?nən Back to Life program.

Lekwungen Story: Place to Smoke Herring Video

Endnotes

[1] Within British Columbia's colonial borders, there are over 200 First Nations communities and a wide diversity of languages, traditions, and cultural protocols (see the First Peoples' Map of B.C.).

[2] Joseph L., Turner N. J. (2020) *"The Old Foods Are the New Foods!": Erosion and Revitalization of Indigenous Food Systems in Northwestern North America*. Frontiers in Sustainable Food Systems. 4:596237. https://doi.org/10.3389/fsufs.2020.596237

[3] Davis, J., Twidale, E. (2011) *Cultivating Food Sovereignty: Indigenous food systems on Vancouver Island*. https://www.kpu.ca/sites/default/files/ISFS/2011-INDIGENOUS_FOOD_SYSTEMS_ON_VANCOUVER_ISLAND.pdf/

[4] Truth and Reconciliation Commission of Canada. (2015). *Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada*. http://www.trc.ca/assets/pdf/Executive_Summary_English_Web.pdf

[5] Miller, J., Residential Schools in Canada (2021). In *The Canadian Encyclopedia*. https://www.thecanadianencyclopedia.ca/en/article/residential-schools

[6] Macdonald, N. E., Stanwick, R., & Lynk, A. (2014). Canada's shameful history of nutrition research on residential school children: The need for strong medical ethics in Aboriginal health research. *Paediatrics & child health*, *19(2)*, 64. https://doi.org/10.1093/pch/19.2.64

[7] FemNorthNet. (2016). *Colonialism and its Impacts. Resource Development in Northern Communities: Local Women Matter #3*. https://fnn.criaw-icref.ca/images/userfiles/files/LWM3_ColonialismImpacts.pdf

[8] FemNorthNet. (2016). *Colonialism and its Impacts. Resource Development in Northern Communities: Local Women Matter #3*. https://fnn.criaw-icref.ca/images/userfiles/files/LWM3_ColonialismImpacts.pdf

[9] Walsh, R., Danto, D., & Sommerfeld, J. (2020). Land-Based Intervention: A Qualitative Study of the Knowledge and Practices Associated with One Approach to Mental Health in a Cree Community. International Journal of Mental Health and Addiction, 18(1), 207–221. https://doi.org/10.1007/s11469-018-9996-3

[10] Wildcat, M., McDonald, M., Irlbacher-Fox, S., & Coulthard, G. (2014). Learning from the land: Indigenous land-based pedagogy and decolonization. Decolonization: Indigeneity, Education & Society, 3(3), Article 3. https://jps.library.utoronto.ca/index.php/des/article/view/22248

[11] Tobacco is a nuanced medicine in the context of school gardens - First Nations Health Authority indicates that "natural tobacco has been an integral part of Aboriginal culture in many parts of British Columbia and Canada. Used in ritual, ceremony, and prayer, tobacco was considered a sacred plant with immense healing and spiritual benefits". However, relationships to tobacco are complicated and not all schools will allow tobacco on their grounds.

[12] This follows the proper protocol in receiving the teachings in a good way, and this protocol may vary across Nations.

Public Health Association of BC

BRITISH COLUMBIA

FARM to SCHOOL BC

Public Health Agency of Canada

Agence de la santé publique du Canada