

# An Environmental Led Response to Black Creek Community Farm

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A DISSERTATION\* SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF ENVIROMENTAL STUDIES\*

August 2019

GRADUATE PROGRAM IN ENIVROMENTAL STUDIES YORK UNIVERSITY TORONTO, ONTARIO
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#### **Abstract**

An Environmental Led Response to Black Creek Community Farm is the documentation of my process of building a curriculum that is a directly responds to the site itself. My is based around the concept of land-based education for children as a means of community self sustainability, collective community care and understanding sense of self and place. This major project is a compilation of photographs, academic theory, community-based research, interviews and a curriculum based on my research.

#### **Dedication**

I would like to dedicate this paper and major project to Kitty RLynn and Adrianne Xavier. Your encouragement, insights and belief in me has been instrumental and valuable beyond words. It has shaped my perspective and allowed me the patience and drive to finish this process. I would also like to thank my parents for their love and support. A warm thank-you to my supervisor Lisa Myers for guiding me through the program and helping me produce my best work. I want to acknowledge the tremendous contribution of the people I collaborated with to create the curriculum, the beautiful insights of the interviewees and of course the land itself. Without all of you this would not be possible. Again, with all my heart I thank you.

#### Introduction

Land-based education is a deeply personal and exploratory avenue of education. It opens a space for students to explore themselves and their relationship to the natural world. I believe land-based education is work that should be done within community and is shaped by the unique contributions of each participant to create a collective learning experience.

My major project takes the theoretical framework of land-based education and applies it to a curriculum that is informed by the land and community of Black Creek Community Farm. Instead of creating a curriculum and imposing it on a place, the curriculum is built in a response to the site. This means lesson plans are based around the community, specific geography, watersheds, soil, plants, bioregion, weather patterns, history and current-day social realities of Black Creek Community Farm. Research the responds to site requires observation and actively listening. This form of research means the "environment" in every sense of the word takes leadership and my job as an academic is to cater to its needs. This process I coined as an "environmental directed response".

To be able to create a comprehensive curriculum I first had to develop a greater understanding of Black Creek Community Farm and the land it sits on. This research included: a literature review of history of the land, the socio-political environment of the neighbourhood, theory around land-based education and different approaches to children's education. Below I have included a brief overview of my research. Every component has informed my creation and helped me to develop a curriculum for an eight-week program for children aged eight to twelve years old.

### **Deconstructing Settler Colonial Narratives of Place**

As a white, Ashkenazi Jewish settler my relationship to Turtle Island ancestrally dates back three generations on my father's side and I am the first generation born here on my mother's side. My relationship to the land that Black Creek Community Farm sits upon is only a year old. I spent last summer co-facilitating an herbal medicine workshop there and tended to a garden throughout the growing season. I do not live nor was I brought up in the Black Creek neighbourhood and my research relies on the insights of people who are from the community and have deep relationships with the land. The major findings of my research came from the interviews I conducted with four BCCF staff members. Through out this paper my academic research will be prefaced by findings from my interviews and my observations of the land itself.

The interviews were informal and took place around the dining room table at the farm. There I chatted with staff members who will remain anonymous, about what brought them to the farm, the philosophies behind the farm and the importance of the BCCF in the community. The interviews felt warm and casual. We drank tea, laughed and shared stories of our experiences working in the garden, working in community and the structural barriers of working within a non-profit model.

The overarching theme of the interviews I conducted was community understandings and relationships with the land. When the interviewees were asked about their relationship to the land and the community at BCCF, many of them described the farm as an oasis from the city. Explaining that the city is a hard place to build community. Many of the interviewees described BCCF as a second home and a place they felt instantly connected to. Universally interviewees expressed that the farm was important for community member's mental and physical health because it is a place where people can leave their homes and get outside. Other findings from the

interviews will be dispersed through-out this paper but before we move forward into the demographics, social realities and history of the site I want to first introduce you to the land.

# The Site



Black Creek Community Farm in the early spring.



A photo showing the juxtaposition between the greenery of the farm and the buildings of the city.



The soil and community garden plot the curriculum is based on.

When you walk through the gates of Black Creek Community Farm it is as if you leave the city and enter a new world. It's a place of possibility and a gathering place for community care. There is a feeling that I experience when I go there, a sense of acceptance, warmth and transformation. The farm is located between the watersheds of the Humber River and Black Creek. For centuries the land has been used for agriculture (TRCA, 2018). The farm is currently surrounded by major roads, high rise buildings and highways 7, 400, 401, 407 and Black Creek Drive (Humber Watershed Task Force, 1997). However, when you walk into the farm it is as if you have left the city completely. Situated in the bio region of Niagara Escarpment, Carolinian Forest (Humber Watershed Task Force, 1997). The farm is lush and full of plants, community garden plots, greenhouses and plants growing from all around the world. The soil is clay lome which means it is well-balanced, rich with nutrients and a little dense for growing (Metropolitan Toronto And Region Conservation, 1959). Native species of the region are black walnut trees, blue beech trees, sycamore, tulip-tree, shagbark-hickory- many of these plants are threatened or on the endangered list (Humber Watershed Task Force, 1997). Animals that live there are deer, beaver, mink, fox, coyote, smoky shrew, northern long-eared bat and much more(Humber Watershed Task Force, 1997).

Watershed: The Humber watershed is 908 square kilometers and one of the largest watersheds of the Greater Toronto Area and is composed of 750 streams (Humber Watershed Task Force, 1997). The Humber River is divided into three main branches which join and enter Lake Ontario. Black Creek river connects to the Humber River and flows through the Black Creek Neighbourhood and the communities of Concord, Downsview and Weston(Metropolitan Toronto And Region Conservation, 1959).

With a drainage area of 66 square kilometers, the Black Creek subwatershed is the smallest of the Humber watersheds (Humber Watershed Task Force, 1997). It is the most degraded of all the Humber subwatersheds and runs mainly through urban areas (Humber Watershed Task Force, 1997). Because of its high levels of pollution, Black Creek can only support the most pollution tolerant species of fish such as blacknose dase (Humber Watershed Task Force, 1997). The subwatershed was created by retreating glaciers thousands of years ago (Humber Watershed Task Force, 1997). The river begins to travel west on the Iroquois Plain once it reaches the region of York (Humber Watershed Task Force, 1997). Only 2% of the subwatershed is forested (Humber Watershed Task Force, 1997).

Plant communities along the Humber have been threatened in the past 200 years due to deforestation and development (Humber Watershed Task Force, 1997). Many prairie and bog species such as Labrador tea, lady's slipper, prairie grasses and pitcher plant have become extinct because of wetlands disappearing due to filling or draining (Humber Watershed Task Force, 1997). The Black Creek neighbourhood used to be mainly farmland (Innercity Outreach,2018). However today the land is mostly occupied by major highways, high rise buildings and residential/commercial buildings (Innercity Outreach, 2018). Still there are sprinkles of green space in the neighbourhood BCCF being one of the remaining pockets of farmland.



Above is pictured the Black Creek Watershed in the winter.

### Getting to Know the Land

I wanted my curriculum to be a response to the site, the watershed, bugs, plant communities and weather patterns. I knew that the best way to gather this knowledge was through observation and I thought that photographs would be a good way to capture my findings. Throughout, the winter and spring I went to Black Creek Farm to take photographs to document the seasonal change, what plants and animals lived there and to develop a feel for the place. Photographs were taken on my cell phone or with a polaroid camera. My question when I began this process was can photography bring me closer to the land. As I was reviewing my

photographs I realized that they did not tell a story of the land itself, but my perception of it and my relationship to it. After many revisions I decided that my project was not about my understandings or perceptions of the land but creating a curriculum so that workshop participants could build and share their own. The process of taking photographs led me to decide that this would be one of the workshops in my curriculum and not a photo essay of the farm. However, for the purposes of this paper some of the pictures I took are included throughout. In terms of the curriculum I decided pictures would be taken and compiled to tell a story of each participants observations and relationship to the Black Creek Watershed. The other methods of creating the curriculum would be through historical research, interviews, literature review and examining the weather patterns, climate, and ecology.

The curriculum was created in collaboration with BCCF and an organization that will remain un-named for confidentiality purposes and of course the land itself. The curriculum is based on the frameworks of cultural sharing (Cornelius, 1999) and participant-led facilitation (Lewin-Benham, 2006). This includes recognizing each person's personal experiences and insights as knowledge. The interviews provided my research with community perceptions of the neighbourhood. In addition to their knowledge I also researched into the demographics, socioeconomical circumstances and systemic barriers of the area to gain a better understanding of the neighbourhood.

In the early half of the twentieth century, the Black Creek neighbourhood was mainly comprised of farmland occupied by European Settlers (Inner City Outreach, 2018). The neighbourhood began to change in 1962 when city planners decided to develop the farmland into what is called a "mixed neighbourhood" (Inner City Outreach, 2018). This urban planning model was designed for families of mixed socio-economical status ranging from working to middle

class residents and is comprised of single-family homes, housing co-ops and apartment buildings. In addition to these developments, employment, commercial, law enforcement and social services were created. In the coming years, high-rise apartments were constructed along Jane Street now known as the 'Jane-Finch" corridor. In the years to come, immigrants from all over the world were encouraged to come to and were placed in this neighbourhood (Inner City Outreach, 2018). Today the "community is home to a very diverse population of about 25,000 residents." (SNAP,P.1, 2012). "Over half the residents speak a language besides English at home, most commonly Vietnamese, Spanish, Italian, Tamil and Arabic" (SNAP, P.1, 2012).

### **Current Day Realities and Barriers of the Neighbourhood**

Many of the systemic barriers people face in the Black Creek neighbourhood stem from the structures of internal colonialism. Tuck and Yang give an overview of the definition of internal colonialism and the entangled colonial structure of genocide and slavery. Internal colonialism involves modes of control such as over policing, prisons, surveillance, segregation, criminalization, racial profiling and structural racism creating intentional "ghettos" (Tuck&Yang, P.5, 2012). Although this paper is not talking about Indigenous experiences with internal colonialism, and the Black Creek neighbourhood is not only comprised of people with a history of enslavement within North America, the structures of internal colonialism and antiblack racism are pervasive in the neighbourhood. Internal colonialism is used to control communities. Barriers to employment, access to fresh affordable food and adequate housing, over-policing and racial profiling of a neighbourhood are forms of internal colonialism.

Many have critiqued the Black Creek neighbourhood's design and architecture developed in the 1960's as "structural racism". The co-operative and low-income housing units were cheaply and poorly constructed. Many contain asbestos and black mould (The Jane and Finch

TSNS Task Force, 2015). In 2017, hundreds of residents living in Toronto Community Housing (TCH) were evicted from their housing. Five hundred and fifty TCH units were boarded up because they were deemed "unsafe", half of those units were claimed to be beyond repair (Rieti, 2017).

TCH housing residents were then sent to new housing units based on a draw, placing residents in all corners of the city far away from their homes, jobs and communities (Rieti, 2017). Residents in general in the Black Creek are have expressed concern, "about a lack of accountability on the part of landlords (both public and private) to provide high quality housing. This lack of accountability has led to issues such as rodent infestations, eroding infrastructure, and residents being exposed to other health hazards due to a backlog of work orders" (The Jane and Finch TSNS Task Force, P.37, 2015).

Institutional racism is also demonstrated in the neighbourhood within the Toronto District School Board (TDSB) through streamlining (Maynard, 2017; O'Rourke, 2017; Price, 2017), over-policing of Black and Indigenous students in schools (Maynard, 2017), disproportionate expulsion of black students (Houston, 2017) and a Eurocentric curriculum (Sefa Dei, 1995). Although, the articles I have referenced here are not specifically speaking about Black Creek and talking more generally about anti-black racism in the TDSB, there have been multiple community reports from the Black Creek neighbourhood highlighting the issue in their neighbourhood. Schools in the Black Creek area have the highest expulsion rates in the city, the highest percentage of children in child welfare, and disproportionate police carding and racism (Monsebraaten, 2015). There are also many barriers for adults in the area who wish to return to school including: "unstable finances, lack of childcare and lack of information of existing programs" (The Jane and Finch TSNS Task Force, 2015). Over-policing within the school

system and the community at large is pervasive. Community members have described increased police presence in their neighbourhood as, "Not giving them a feeling of safety but increases their sense of anxiety and fear" (The Jane and Finch TSNS Task Force, 2015). This fear leads to threatened mental health and over-all well being in the community.

It may seem that all these systemic barriers are disconnected, however, they are all a part of a larger picture of systematic oppression that contribute to community stress, fear, wellness and access to basic needs and education. By highlighting these as systemic issues I show hegemonic power structures that lead to unjust living conditions (among other social conditions) and take the onus off of the community that has been criminalized by the media as "dangerous" and full of "gang violence" (Pagliaro,P.1, 2013).

The systemic barriers discussed above are not overtly addressed in the premise of BCCF. However, they are inherently within BCCF's work, because the organization acts as a community centre run for and by the community. A major systemic barrier that **is** directly addressed by the farm is access to fresh affordable food. The Black Creek area is characterized as a "Food Desert" meaning "geographic areas where residents' access to affordable, healthy food options (especially fresh fruits and vegetables) is restricted or nonexistent due to the absence of grocery stores within convenient travelling distance" (Food Empowerment Project, P.1,2019)

The Food Empowerment Project (F.E.P) challenges the term food desert because the USDA characterizes the definition by a neighbourhood's proximity to grocery stores and food providers. This definition neglects to encompass other socio-economical factors such as environmental racism, cost of living, cultural appropriateness of available foods, ability and

space for community to grow their own food, people being time and cash poor etc. The F.E.P considers terminology such as "food apartheid" and "food oppression" to be more accurate (Food Empowerment Project, P.1, 2019).

In 2016 The Black Creek Food Justice Report highlighted that, "Community members are still facing soaring food prices and struggling with a lack of access to healthy, affordable and culturally relevant food. They are policed in grocery stores and throughout the community and have very limited access to transportation to reach food sources. Community members have expressed that they have had enough conversation and are ready for direct and ongoing action that addresses and responds to their concerns" (Black Creek Food Justice Network, P.32, 2016).

Black Creek Community Farm (BCCF) was established in direct response to food insecurity and issues of food access in the neighbourhood. In their 2016 Black Creek Food Justice Network Report, they also challenge the term "Food Desert" but classify the neighbourhood as a place where "incomes have fallen and access to high quality, fresh, and affordable food is a growing challenge. The lack of local shops, supermarkets, amenities and services are believed to be creating "liveability challenges," including food insecurity" (Black Creek Food Justice Network, P.5, 2016). BCCF has been described as "revolutionary gardens" that promote food justice, accessibility and a community example of sustainability and directly addresses the concerns and food access needs in the community.

From the interviews I gathered: Black Creek Community Farm is a grass roots non-profit organization that was formed in direct response to address issues of food insecurity in the neighbourhood. Most of the staff began as volunteers. All the interviewees were living in the community and that is what motivated them to volunteer at the farm. Some of the interviewees

described staff as connected to the needs of the community and in tune with/ invested in how the community will respond to the programming.

The farm has many components including: Community Shared Agricultural Program (CSA), Food Forest, Kids Programing, Youth Programming, Mom's programming, Seniors programming, Food Preservation Workshops, Community Garden Plots, Bees, Livestock and so much more. BCCF also shares the space with other organizations such as the African Food Basket and Urban Harvest.

When asked about the demographics of the BCCF community, interviewees talked about how many community members of BCCF are immigrants from farming backgrounds/areas and being at the farm reminded them of home. Interviewee's explained that BCCF is a place where community members can access fresh produce that is culturally appropriate, and not easily or affordably available in the grocery store. Being connected to the land at BCCF reminded people of their connections to other landmasses and fed aspects of themselves that is hard to connect to in the city. Interviewees felt invested in BCCF because of their desire to teach their children about reciprocity and respect for the land, growing food and contributing to their community. Interviewee's expressed how much gratitude the community had to have the opportunity to get out and feel connected with people and nature, especially the seniors.

Instead of charity-based programming the farm operates on principles of community care, inherent community knowledge, respect for diversity, striving towards equity and a reciprocal co-existence with the land. Within the larger context of an oppressive system, this program is a pocket of sustenance, community leadership and holistic education.

However, the program faces systemic barriers of its own. Within the context of non-profit organizations, funding and resources are limited. A common theme through the interviews was the programs' challenges with funding. The organization funds programs by applying to grants. If the grants are discontinued or their application is not selected it limits the potential of programs running. This also jeopardizes longer-term programs such as camps. There is not enough space and financial security at the farm to grow enough food to feed the whole community. Therefore, education is such a crucial component of their organization. By teaching skills to community members to grow their own food they are teaching people to look after themselves and their families and building community sustainability.

Learning about BCCF's focus on education reinforced the importance of building a land-based curriculum for my major project. My previous work as an educator and gardener provided me with the knowledge to understand the skills required for facilitating gardening workshops. I knew how to make a general outline and plan, but I didn't know the specific histories and nuances of the site.

The questions asked in the interviews inquired about each interviewee's relationship to the site and their understanding of the land. They each gave great insight into the ecology, the community and organizational structure. But when asked about the history of the land of BCCF all interviewees did not have a clear understanding of the history but were trying to gain a greater knowledge of the Indigenous histories of Black Creek.

This brought me to delve deeper into the history of the land. Who had lived there before and how the land and occupants shifted and changed over time. I did not want to focus on the ownership of the land or only include settler timelines and histories. I thought that by researching the history of the site I would gain answers to how to create a curriculum that responded to it.

However, through my research I realized how difficult documenting the history was and brought me further away from responding to the site itself.



This picture represents the winding roads of history and my search leading to no real conclusions.

# A History of the Black Creek Neighbourhood

As a settler, I believe it is important to educate myself and other settlers about the history and land we live on (Lowman et al, 2014). This pays respect to those whose land we are on and who have undergone centuries of colonial violence to establish and uphold what we call

"Canada". I recognize that there is no one history of this place and the stories told are subjective to their authors. Many Indigenous histories of this place have not been recorded until recently, this is in part because these stories would have been passed down through oral tradition (Cornelius,1999). Indigenous languages have been threatened by the enforcement of the residential school system and the Canadian governments' continuous attempt at assimilation. Furthermore, many of the histories recorded are the narratives of settlers or colonial institutions such as churches or universities (Tuck &Yang, 2012). As a settler I am relaying these histories through my research and my own worldview. This means what I am conveying is limited and controversial, because there are many conflicting interpretations of the history of the Black Creek neighbourhood.

I acknowledge and pay my respects to the numerous Ongweoweh nations that have lived on and stewarded this land. Given the limited documentation of this time and the multitude of interpretations, I recognize that this information is controversial and contested. I do not claim that this is the full history. This account is simply a compilation of my academic findings.

The origin of the name, "Toronto" is contested, some sources say the name derives from the Mohawk term "Tkaronto" while others claim that this is a Huron-Wendat word, the words has been said to mean meeting place (Hayes, 2010) or where the trees are standing in the water" (Johnson, 2010). I will be referring to what is now known as "Toronto" by the name tkaronto throughout this paper. As exemplified in the naming of "Toronto" alone, political definitions of place have shifted over time. It is safe to assume depending on the political climate the histories have also been altered. Territories and borders are political parameters that have shifted and changed over time. "Mapping creates taxonomies of land, water and peoples. It generates false territories and false temporalities, as land becomes property in a linear history of

shifting ownerships. Mapping is knowledge generated in service of empire" (La Paperson, P. 123, 2014). Territory, stewardship, ownership and borders of the land are subject to the time period and context of people in power. The story changes depending on when it is told and by who. These parameters are artificial because the land is the same no matter what it is classified as. However, ecology and landscapes shift with agriculture, migration, introduced plants, deforestation and development (Camil, 2010).

Black Creek is a prime example of how cultural interaction can change the environment of a neighbourhood. "Cultures interact on many levels, including the two-way exchange of knowledge, technology, and food, as well as conflicts over land resources and power" (Cornelius, P. 47, 1999). This can be dated back to European settlement and the interactions between the Europeans, Huron-Wendat, Haudenosaunee, and Anishinaabe. The collision of worldviews and values changed the environment forever. It was the war between regarding the land as something to value, cohabitate and live in partnership with versus an object to own and control (Cornelius, 1999).

"How people perceive their world determines how they structure their ceremonies, economy, government, education, technology, and health systems" (Cornelius, P. 46,1999). The collision between worlds and the imposing of setter colonialism has created a culture where the religion is capitalism, the economy is based on resource extraction and exploitation, and the governance is dictated by those who are not in a reciprocal relationship with the land. The land is viewed as a commodity, as are the people.

Responding to site is important to my research because there are stories that the land holds. If I am encouraging relationship with the land through education then it is important to know who lived on, died and fought for this land. It is important to acknowledge that this land

was stolen. By creating curriculum around relationship, I am trying to deconstruct the perception of land as commodity and mentor people in understanding it as a living entity that feeds us all and has been continually and constantly abused. When I was growing up in school I was only taught the histories of European settlers. In my search to develop a better understanding of the history of Black Creek I wanted to know who lived in the area before and after settler contact, to inform my curriculum with histories of the area that are not centered around settlers. This led to be difficult as it is not my history to tell and my academic findings were limited at best. However, from my research I gathered:

"Indigenous peoples have lived in the Toronto region for at least eleven thousand years." Freeman, 2018). Between 9,000 and 5,000 B.C. archeologists believe the "Clovis" people were the original inhabitants (Bobiwash, P.7, 1997). Those who have made this place home include but are not limited to the Wendat (Huron), Tionnontati (Petuns), Haudensaunee (known as the Iroquois confederacy and the then five nations Mohawk, Onondaga, Oneida, Cayuga, and Seneca), and Mississaugas of the Credit (Freeman, 2018). Thousands of years before European contact, the Great Lakes were a place where many cultures met for trade and commerce (Bobiwash, P.7, 1997).

In a Toronto Star publication "Mapping Toronto's Indigenous Roots", the Toronto area is mapped out to show the Indigenous territories of the area. The map shows that there was evidence of Huron-Wendat stewardship of the land dating back to 1450 (Winsa, Sat., June 16,2018). Archeological evidence shows that the Huron- Wendat who first settled in Tkaranto later relocated to "Huronia" which was south of the Georgian Bay. In the 16<sup>th</sup> century there has been documentation of contact and trade relationships between the French explorers in

"Huronia" (TRCA, 2018). "In 1850 the building of railways over lands previously untouched by settlers uncovered many ancient Wendat and Petun ossuaries and village sites" (Freeman, 2010).

In the 1660's the Haudenosaunee were displaced from their home located south of Lake Ontario in the Finger Lakes region and brought over to the Great Lakes (TRCA, 2018). In the 1640's Jesuit missionaries arrived bringing with them epidemics such as smallpox, measles, influenza. Of the estimated 65,000 Haudenosaunee people that lived there, 50% died when introduced to the European diseases (Bobiwash,1997). The Haudenosaunee relocated from south of Lake Ontario in the Finger Lakes region, to the Great Lakes region and currently the Grand River, which was granted to Joseph Brant after the American Revolution (TRCA, 2018).

The Huron- Wendat were decimated by warfare with the Haudenosaunee and the widespread illnesses brought over by the Europeans. In 1650, they eventually fled "Huronia"(TRCA, 2018). "Today they have established communities in Wendake, Quebec and in the American states of Kansas and New York" (TRCA, 2018).

There are archeological findings estimated from between the mid 1400's (Van Neirop, 2016) to the 16th-century of an ancestral Huron-Wendat village on the east bank of the Humber River (Winsa, 2018). Archeologists say that the Huron-Wendat established large villages where they farmed corn, beans and squash, exhausting the land and relocating every 20 to 30 years (TRCA,2018). It is difficult to distinguish who lived there at what time and how much settler contact encouraged inter-nation wars and displacement.

Although, I could not find historical documentation of the Anishinaabe living in the Black Creek area, and their final resting place was further west of Toronto, the Toronto Islands

were a stopping place on their migration route. Later the Mississauga's of the Credit resided in tkranto and reclaimed the territory (Bobiwash, P.8, 1997).

In 1787, the British administered the Toronto Purchase agreement with the Mississaugas of New Credit (Freeman,2010). In 1794, one year after the founding of "York", this agreement was declared invalid. The crown re-proposed a revised version of the "Toronto Purchase that included the Toronto islands in 1805. During this time period, the colonial government made many political manoeuvres to disrupt any alliance the Mississauga's of New Credit had with the Six Nations and make the Missasaugas' financially dependent on the crown. (Freeman,2010). "An uprising very nearly did occur in 1796 when Mississauga chief Wabakinine was murdered on the waterfront by a British soldier who had tried to prostitute Wabakinine's sister" (Freeman, 2010).

However, the historical documentation I can find about this time period is often contradictory and there are many different interpretations of who lived in Tkranto at what time. The Haudenosaunee were agricultural and longhouse people (Hill, 2017) and would have been more stationary (Hill, 2017) whereas the Mississauga's and the Huron-Wendat would have traveled through and around the territory seasonally (Bobiwash, 1997).

### Educational Approach, Philosophy, Trauma-Informed Pedagogy

In my academic venture into finding the history of Black Creek I realized that I was approaching my research wrong and made me re-examine what a curriculum that responded to site meant. I wanted to understand in order to pay respect to the land I was researching. The deeper I delved into my reading, the more I realized that there was no one answer. I was caught up in trying to understand whom the land belonged to which is a colonial way of thinking and

does not respond to the land itself. Building reciprocal relationships with the land is not about ownership. As I did my research, I found that I was contradicting my own definitions of what land-based education meant. I was spending more time trying to research academic texts that I was ignoring the site it self, or the insights of the people who had long term relationships with Black Creek Community Farm.

Connection and observation are the key components to land-based education. On my way to my interviews with Black Creek Farm staff, I got lost following Google Maps. My phone died while I was walking and so did my directions. I was late and working myself into a panic. When I looked around me, I saw a sign for the waterways of Black Creek, and I knew that I was close to the farm. I stopped for a moment and took a breath. It was in that moment I knew that I was taking the wrong approach to my research. To understand the land, I needed to pay attention to it. Everyone is going to have a different perception of its teachings or their experience with it. What are the waterways? What is the consistency of the soil? What birds and animals live here? What plants grow here? These are the lessons and questions that led me to incorporate sensory learning, observation and exploration into my lesson plans.

### **Approach to Education / Community Engagement**

Curriculum is not just lesson plans, it is the format and philosophy of how, what and why you want to teach. In my search to incorporate collaboration and center the knowledge of those already working and living in the community, I asked the interviewees what they wanted to convey to children by working with the land.

Interviewees conveyed such beautiful teachings they wanted to share with the children.

The main lesson was nature appreciation. Interviewees believed we need plants to survive. If we don't have plants, animals, bees to pollinate 60 percent of our crops, we will be gone. The

impacts and realities of climate change are increasing and affect our food systems, environment and survival globally. Therefore, they expressed that it was important to share knowledge about plants, animals and our role to protect the environment. As educators they believed that it is our job to mentor stewardship of the environment because it will change how the next generation approaches business, garbage disposal etc. To approach such big topics, it is imperative to be creative, flexible and patient in your approach to facilitation. It is very important to encourage imagination and play. Experiential learning was stressed as one of the most important ways of learning because exploration of self and nature is important in personal development and contributing to the community. Unstructured time was also seen as crucial to create and develop observations and to engage with nature. When people have the space to imagine they can go beyond what they have been told and start to see things differently. If we take a pause by observing nature, copying nature, we can learn. If you look at nature everything just goes in a cycle. If we can copy nature we begin to realize we don't need as much as we are taking.

Most importantly interviewees believed in the agency of each child and their power and ability to make change. They don't have to wait until they have a grown-up voice to make their voice heard. People of all ages can take control of their own learning and are capable, smart and able. Children are capable of really big things! Children are also responsible for the space and the land. The farm is theirs too. Facilitators need to provide the space for children to take agency of their learning and to voice how and what they want to learn. Provide the opportunity to connect with nature, learn how to grow their own food, where their food comes from and what real food looks like. Interviewees also wanted to mentor the children in gardening and tree planting, facilitate maple syrup harvest and teach about permaculture principles.

Overall BCCF's approach to education for children reflected the principles of Reggio

Amelia and Waldorf education. The farm operates on anti-oppression principles and uses trauma informed facilitation practices. Below are my literary findings to the philosophies behind these approaches.

### Waldorf

Waldorf education is based on the anthroposophical philosophies of Rudolph Steiner. The pedagogy mirrors the basic stages of a child's development and holistically views each human being as body, soul and spirit (Mays, 2014). Waldorf education caters to each child and encompasses multidisciplinary lessons that address the needs of kinesthetic, visual and auditory learners. Experiential learning is one of the major focuses of Waldorf education (Mays, 2014). Like Reggio Ameillia, Waldorf education has an art based and experimental focus and incorporates fine arts such as drawing painting and sculpture, and practical skills such as sewing, knitting, woodworking and music (Whistler Waldorf School, 2018).

What appeals to me most about the Waldorf approach is its focus on child development and nurturing the growth of each child's imagination and agency. I also am drawn to the pedagogy's adaptability and use globally.

The work outlined in "Educating Traumatized Children: Waldorf Education in Crisis Intervention" resonated most with me as it outlined accessible ways to engage with children who had experienced intense trauma and uses education as a tool to support and encourage growth, facilitate coping strategies and encourage personal development and healing.

"Emergency Waldorf Education" has been used with children in war zones such as Palestine and Syria and after natural disasters like Fukushima (Ruf, 2014). There are three stages

of emergency education -- acute, early and trauma oriented. Acute education happens shortly after trauma has occurred and aims at alleviating physical distress such as injury and acute shock (Ruf,2014). Early emergency education takes place in the initial stages of Post Traumatic Stress Disorder(PTSD) and address the etheric body introducing concepts of mindfulness and addressing disassociation (Ruf,2014). Trauma-oriented education is introduced in the later stages of PTSD and has a more psychological focus (Ruf, 2014). Lastly, trauma- oriented intensive education is used in cases of chronic PTSD, when extreme stress and personality changes are consistent because of past trauma (Ruf, 2014). Emergency education is not trauma therapy. It's educational-artistic methods, which are based on the principles of Waldorf education, and applied in the first weeks after a traumatic event but before the stage of post-traumatic stress sets in. Emergency education seeks to activate and strengthen a child's powers of self-healing in order to prevent, or at least assuage, pathological developments" (Ruf, P.69,2014).

#### **Emergency education uses:**

**Physical stabilization is a method that** aids children to feel physically safe and reconnect to their own (physical) bodies. The priority is for any physical injuries or ailments to receive medical attention (Ruf, 2014).

**Somatic stabilization** brings awareness to the body's sensations, patterns and pain to help awareness of current surroundings and the physical body. This association can help bring a person back to their own body and away from reoccurring trauma or stress that keeps reoccurring. Somatics can help a person develop a sense of safety in their body, heal emotional wounds and develop a sense of continuity (Ruf,2014).

Psychosocial stabilization is the process of building reliable networks of relationships and trust in the environment. Psychosocial stabilization explores artistic educational approaches such as: painting, drawing, modeling, play and drama; movement (sports, walking, gymnastics, eurythmy); resource-based processes (diary techniques, body-oriented techniques, imaginative techniques etc.) and behavioral therapy (anxiety management, assertiveness training etc.) The overall aim is to strengthen children's weakened self esteem in relation to their environment (Ruf, 2014).

### **Mental-biographical stabilization**

Trauma can cause brain fog, loss of memory, intellectual barriers, weaken confidence and weaken a sense of self and purpose. Mental-biographical stabilization is the act of creating positive life experiences so that traumatic experiences are not the only ones a person is revisiting. This method encourages participants to make decisions, be conscious about the experiences they choose and realize there can be positive experiences even if they come from traumatic circumstances (Ruf, 2014).

These approaches to education resonated with me and elements of their pshyco-social and physical approach to pedagogy are what I would like to incorporate into my curriculum. However, I recognize PTSD only manifests when the trauma is passed. If a person is consistently in a state of crisis or war there is no "post". There is only consistent traumatic stress (Goldhill, 2019). PTSD support can only be offered if the person affected is in a safer environment and not still in traumatic circumstances. This includes people in abusive relationships, children in tumultuous or violent homes, and people facing housing precarity or homelessness. Given that the curriculum I am creating is geared towards children who may have experienced war or any of the above circumstances it is important for me to understand the framework of emergency

education but also acknowledge that it may not be appropriate to address trauma directly within the workshops.

My approach to using trauma-informed education is acknowledging that participants may have experienced trauma or currently be living in traumatic situations. My curriculum aims to provide a warm and welcoming space and offer flexibility to emotional responses, conflict or things that may occur because of people's lived experiences.

### Reggio-Ameillia

Within the principles of Reggio Emilia, teachers act in partnership with the children and act as a mentor and a guide for children to construct their own learning (Edwards et al, 1998). When children determine their own learning, they feel empowered and invested in their education (Cadwell, 1998). Ultimately, I hope the curriculum I build will facilitate the creation of an environment where each student contributes and brings their own experiences, histories and perspectives to the table. (Freire, 1970; hooks, 1994).

Education should be a process that encourages and feeds students' souls (hooks, 1994). A crucial component of this is the space to explore and play. Play encourages imagination, telling stories and creating new ways to understand the world with each other. Promoting play can be done by providing space for children to determine how they want to engage with artistic materials, building materials, clay, soil and the playground of the outdoors (Cadwell, 1998).

Reggio Ameillia creates an environment where the students can pick and choose what they want to do. A vast range of art supplies, building blocks and toys are available to them and

they are given the space to explore. When approaching the classroom, teachers don't dictate what the day will look like; instead they ask the group what they want to learn (Lewin-Benham, 2006).

Reggio Ameillia offers consistency and continuity throughout its lesson plans and creates an environment that is hands-on and community oriented. Parents are integrated into the classroom; students can physically re-arrange and create what the classroom space looks like and the focus is on the children leading their own education. This includes self-contained activities, uninterrupted time without teachers unless they are collaborators, and do not interrupt the children making space for flexible time (Lewin-Benham, 2006).

The principles of Reggio Ameillia are:

- "Fully recognizing children's potential
- Working in small groups- children among themselves as well as with teachers
- Making space and time integral to how the environment is organized
- Defining each teacher's roles as researcher, constructor of the educational experience,
   and collaborator with colleagues and children
- Integrating a studio (atelier) and a studio teacher (atelierista) in each school and a mini atelier in each classroom
- Observing, documenting, and revisiting children's work
- Fully engaging families
- Providing for teachers' continuing development equally with children's
- "Encouraging the hundred languages to flourish in each child" (Lewin-Benham, P.12, 2006).

The emphasis on children's agency in their own education, hands on learning, the exploration of imagination, and the joint creation and appreciation of environment are what drew me to this pedagogy. The child-led approach of Reggio Ameillia is one of the main foundations I used when building my curriculum.

### **Conscious Discipline**

This leaves room for children to explore their imaginations, create new ideas and be present with their emotions. Instead of trying to control children's emotions or control the classroom with fear or discipline, students are expected to be responsible and respectful and are engaged with compassion and care (Bailey, 2015). As a teacher or facilitator, I believe you must approach a classroom understanding that you never know what is going on in a child's home and if a child is acting up there could be multiple reasons for it. Learning disabilities, lack of engagement, or knowing that acting up will give them attention can be some reasons why students appear uninterested or resistant.

The Impacts of Education in the Garden



In the interviews I asked staff about the existing programing, each interviewee's role at the farm and their insights into how to build comprehensive and inclusive programs that respond to the community's needs. I wanted to know how education within a garden setting differed from facilitator's experiences in a classroom setting and learn about the farm's pedagogical approach.

Overall interviewees said programming with children and people with all ages is easier in the garden. Participants felt more engaged and that they had more agency over their learning.

Interviewees described running workshops in the garden as fun and intuitive and mentored participants in building a connection and appreciation with nature.

Interviewees found that workshops in a garden setting were easier to facilitate for multiple reasons. The garden setting allows for exploration, which makes it easier to facilitate several different needs in one space. Interviewees believed that education felt more inclusive in a garden setting, which lead to a greater sense of trust, co-operation, autonomy and teamwork. Using pedagogies such as "Risky Play" and hands-on learning helped boost children's confidence in the garden. Interviewees believed that trusting children to use tools facilitates self-control, instills a sense of responsibility and stewardship for the land, and gives students control over their own learning.

After the interviews I understood that my curriculum needed to be based on building a garden. I could see how this process was a platform to have conversations of climate change, life skills, permaculture, food from field to table, food security and connection to land. My focus through-out my studies has been on land-based education. Through my research I realized the best way to demonstrate the knowledge I have gained throughout the MES program was through the hands-on application of building a garden. The only thing I was missing was my own theoretical definitions of what Land Based education meant to me.

## **Land-Based Education**

Land based education helps children develop their own understandings of food systems, ways to adapt to environmental challenges while working with seasonal change and integrating problem solving into the unexpected factors that arise. Crucial to building this curriculum is respecting children's agency to direct their own learning. Through play, children can freely explore new ideas and ways to approach nature, gardening and making art (Cadwell,1998). These insights are encouraged and will ultimately shape their learning experience.

Increasing frameworks of education that incorporate connection to the stories and knowledge of land can encourage a sense of responsibility and respect to the natural world. Land-based education is the process of learning from the natural world, respecting plants, animals, waterways and ecosystems as teachers (Kimmerer, 2013). Land-based education challenges the notion of ownership of the land, territoriality, superiority or entitlement, as it requires the students to understand that building reciprocal relationships with the land is integral to the survival of all things.

Cornelius offers a refreshing and wholisitic approach to education through a curriculum based on respect and reciprocity and centered on corn and Haudenosaunee cultural teachings. Land-based education will always be specific and unique to the participants and land itself, however, her philosophy behind education is transformative and transferable because it views education as a means of empowerment, cultural competency and supports each child in their unique learning process and connection to land (Cornelius, 1999).

In *Land Education*, Tuck, McKenzie and McCoy addresses how environmental education should engage a place-based focus and respond to the specific site where the curriculum is being based (McCoy, Kate, et al, 2017). When addressing education as a response to a specific place it provides students with a more integrated and wholistic approach to learning. For example, in *Braiding Sweet Grass*, Kimmerer talks about basket makers as scientists and sweetgrass as the teacher. Methodology of inquiry means experimenting and observing sweetgrass and answering questions like: How is it twisted? How does it smell? How did it feel on the student's hands? (Kimmerer, 2013). These are the kinds of lessons I want to incorporate into my curriculum, allowing the land to be the teacher and the students to have agency in their own ways of learning. How do the stories and histories of the land inform the way each person responds? How does it make each person feel? How does this experience differ from being in a formal classroom?

Tuck argues that land-based education must explicitly address settler colonialism and decenter settler colonial hierarchies of education. She emphasizes that place-based education is not enough and although it is intentionally non-anthropocentric, it does not go far enough to address the genocide of Indigenous peoples and the continued enforcement of settler colonialism (McCoy, Kate, et al, 2017).

Eve Tuck highlights a crucial approach to land-based education which I completely agree with Tuck explains that you cannot talk about the land without talking about its Indigenous peoples and the violence and exploitation they have faced and continue to encounter. You cannot talk about the land without talking about resource extraction, development, oil rigs and expanding pipelines. These are all important elements of land-based education.

Land-based education must include a framework that not only encourages participants to build relationships with the plants and animals but provides a framework that acknowledges how

the Canadian government continues to enforce Indigenous dispossession from the land and extraction of resources.

Decolonization is not a straightforward or easy subject and is highly contested between scholars. However, Tuck and Yang believe that within a settler colonial context, decolonization must involve the repatriation of land simultaneous to the recognition of how land and relations to land have always been differently understood and enacted. They believe, "[s]ettler colonialism and its decolonization implicates and unsettles everyone" (Tuck&Yang, P. 7,2012). I am not claiming that I understand that I know what this means, and I believe that it is truly not my place positionality towards my participation in "decolonization", an approach that resonated with me was Jodi Byrd's call for white settlers to be respondents. A respondent supports the leadership of Indigenous and racialized people and their endeavors to displace whiteness. It is not the white settler's job to lead the work of decolonization in theory or in practice. A respondent's job is to listen, act and engage other white settlers in challenging the power and authority whiteness upholds (Byrd, 2014). Being a respondent requires the process of unsettling and I believe that part of this process begins with shifting settler understandings and relationship to the land. Christi Belcourt believes, "(r)econciliation, must begin with the animals and waters. It must begin with us human beings asking for forgiveness and deciding, together, that we will set a new course based on respect and sharing, so that all living beings can be healthy and thrive" (Belcourt, P.118,2018). Education can be used as a tool to understand who you are and your relationship to place. This process is not only the understanding of who each person is in relation to systems of power and oppression but is also about their understanding and commitment to the natural world. Building a garden within an urban environment can create a sense of connection

to nature. This relationship to the natural world is not easily accessible in communities crowded with high-rise buildings and covered in concrete. Building a relationship with the natural world also establishes a sense of responsibility to it. Mentoring children in respecting the natural world, understanding where food comes from, and creating gardens for their families and community builds a foundation for community self sustainability.

As a settler educator and scholar, I value land education for deepening my understanding of place, including who I am on this land, what that means and all the factors that have brought me here. "Land education forces educators to engage the question of sustainability but not solely in ecological terms. Land education also requires educators and students to ask how their identities with place have been constructed and whose have been omitted in settler curricula" (McCoy, Kate, et al, P.33, 2017). These questions are understandings of self and concepts, which I explore in my curriculum. Land-based education is not only about the atrocities that have and continue to happen to the land and its people but also pedagogy based in resiliency, culture and relationship with the natural environment. If approached holistically and critically, land-based education engages the subjects of history, culture, politics and power.

#### Conclusion

The curriculum is built in collaboration with the Black Creek Community Farm community and the land and is designed for the community participants of the Black Creek area. The curriculum itself is dependent on the specific land of Black Creek Farm. The curriculum I have built from my research encompasses the intersectionality of identities, and the privileges and disadvantages each person has on this land (hooks, 1994). A huge component of this is the space for each student to self identify, determine and share their own perspectives and

worldviews. This enriches the curriculum and adds perspective that may be lacking because facilitation or curriculum templates are limited to the author's worldview (Lewin-Benham, 2006). Drawing upon teaching approaches such as those of Reggio, Emilia and Waldorf, my curriculum structures an environment where each student has space to incorporate who they are and determine what and how they want to learn.

Although the curriculum will be mainly hands-on activities within a garden setting, this paper is meant to exemplify the many layers and intersections this work addresses. Through the collective process of building a garden together we are addressing issues of food security, climate change, relationship building, community engagement, migration, history, colonialism and community self sufficiency.

When children determine their own learning, they feel empowered and invested in their education (Cadwell, 1998). Ultimately, I hope the curriculum I build will facilitate the creation of an environment where each student contributes and brings their own experiences, histories and perspectives to the table.

### **Steps taken to establish programming:**

- 1. Conduct Interviews with staff at Black Creek Community Farm
- 2. Meetings with Black Creek Community Farm about how to collaborate with their programming.
- Meetings with outside organization (which will not be specified due to needs of confidentiality of workshop participants) to ensure funding for programming and to address the needs of staff and workshop participants.

Continual conversation about programming that best meets community needs.
 Required adaptability to change programming or programming dates based on community needs.

#### The Curriculum

By providing space for the community to grow and facilitating skills for people to grow their own food, it creates a ripple effect. Children will go home and teach their families, who will teach other friends and families. By teaching the children to grow food. The curriculum I built is geared towards children who have experienced violence, housing instability and homelessness. This was not embellished within my paper in order to keep confidentiality of participants and not stigmatize their lived experience. Working in a garden can be therapeutic. Interviewees described being at the farm as grounding, supportive and community building. This curriculum aims to facilitate a space that participants can create as their own and feel agency. Ultimately it is about deepening a relationship with the land and strengthening each person's relationship to themselves and the community.

- Eight-week weekly food sustainability program
- Program will culminate with a feast for participants and families
- Program duration: 10am-1:00pm
  - 10-12:00pm programing
  - 9-10:00am set up Facilitators and volunteers
  - 12-1:00pm Clean up, debrief lunch
- Participants: 10 | children:10-14 (exceptions will be made, no one turned away)

## **About**

The program will prioritize local land history, global ecological impact/footprint, food sustainability and family food histories participants will co-create a space to build and share knowledge about individual and communal agency on wellness. The program will use a trauma-informed facilitation that is grounded in principles of anti-oppression. We will approach each

session with compassion, care and adaptability. Ultimately, we are trying to facilitate a learning experience that is led by a participatory, collective experience.

Learning about sustainability with a pedagogic perspective is a process that harnesses respect and requires each person's insights, perspectives and stories be brought to the table. Exploration of self and connection to the land is one of the main focuses of our program. We will promote personal development tools such as strong communication skills, stimulating an active imagination, team building, leadership, public speaking and promotion of overall wellness.

## **Impact:**

### **Physical**

Provide children and seniors the space to play while stimulating analytical thought, physical awareness and team building. Being outside and being active are proven to increase physical, mental and emotional health. It also helps develop gross and fine motor skills through pushing wheelbarrows, digging holes, watering plants, handling seeds and building/designing garden infrastructure.

### **Cognitive**

Land-based education stimulates intellectual growth through observation of the development and growth of plants, understanding food systems, adapting to environmental challenges, working with seasonal change and integrating problem solving into unexpected factors arise. Working in the garden invokes wonder and engages participants to ask questions like: How do plants grow? Why is the soil this colour? Who lives here? Who used to live here? Through our programing we will encourage the youth to develop their skills of observation and research, so they can develop a greater understanding of the land, it's history and its current socio-political realities. Sustainable education for kids also increases cognitive development through awareness of the natural world and uses connections between the mind and body to communicate, problem solve and complete tasks.

## Language

The process of building a communal space for growing food teaches new language in ways of communicating when working together as well as identifying terminology around plants in their stages of development, uses, preparation and preservation of the plants.

#### **Emotional**

This program will encourage learning about emotional responsibility by working together and invites reflection on one's sense of self and connection to place, family and history. These teachings include consistency in care, responsibility to the natural environment and to the team, promoting self-confidence and goal setting. Watching the growth of a plant from seedling to maturity shows each participant cycles of life and ways to contribute to another being's wellness.

### **Alternative learning**

Engaging participants in tactile learning, challenges pre-conceived notions and engages curiosity:

- What does the wind feel like? How does it affect the plants? How does it change?
- Why are the stages of growth different?
- What does this plant taste like? Smell like?
- How does my body react?
- What colour is this plant? Why?
- What plants are native to this geographical region?

## What is the population?

Children impacted by violence.

# Week 1: The land we are on. History and introduction to place. Planning a garden .

**Questions and Themes:** What is your family story?

What do you know about the history of the community/land?

What do you know about gardening? What foods do you like?

Collective planning of a garden.

**Goal:** To develop a sense of place and connection to the garden. To share stories and compile a local community history. To establish the beginnings of a reciprocal relationship with the garden and each other.

## **Curriculum Expectations:**

## **Social Development**

- 1.1 Sharing of stories that talk about each participant's cultural background/knowledge of the land.
- 1.2 Conveying the importance of reciprocal relationships and responsibility to the land and community.
- 1.3 Express thoughts and share experience.

## **Science and Technology**

- 2.1 Development of observation skills
- 2.2 Research through observation and exploration of the farm.

### **Emotional Development**

3.1 Share experiences and express thoughts.

Workshop Layout: Get shoveling! Start preparing the land.

- Collective agreement expectations in the garden, agreements on how to make it a comfortable space for everyone. What are everyone's physical and emotional needs?
- History of Black Creek presented by a staff person.
- Collective Land acknowledgement everyone participates and contributes their knowledge
  - o Discussion: What's special to you about the land? What do you like about the land?
- Activity exploring the farm and drawing activity
- Take a break!
- What do we want to plant? Mapping out the garden.

•

### **Activities:**

Let the participants explore the farm. Each participant will be encouraged to draw a
picture of something that resonates with them on the land and on the farm. At the end of
the workshop series each participant will share their pictures and tell their story about
what they know of this place, the history, the plants and how it relates to them and their
lives.

Time Frame: 1 hour

### **Materials Needed:**

- Pens for each participant
- Notebook for each participant

#### **Assessment:**

**Teaching and Learning Strategies:** Making connections, observation of place, understanding of self in relation to place,

**Vocabulary:** oral history, community history, settler, Indigenous, place, connection, relationship, experience, perception, worldview

#### Resources:

Christopher, Kaci Rae. The School Garden Curriculum: an Integrated K-8 Guide for Discovering Science, Ecology, and Whole-Systems Thinking. New Society Publishers, 2019.

## **Activity 2: Mapping out and Planning the Garden**

This workshop is about starting gardens. Seed and soil. What kinds of things would you grow?

With string mark-out the garden and garden space. Together as a group participant will brainstorm plants that they know and what to grow. Those plants will be written out on pieces of

paper, participants will layout the garden together. After participants have laid out the garden, we will talk about how big the plants will grow, what they like to be planted beside and what they don't, then we will rearrange the papers to leave enough space for plants and compatible plants to grow together. For example: potatoes should be grown on the edge of the garden because they fart. Tomato and basil grow well together, marigolds will deter squash bugs, trips, tomato hornworms, and whiteflies in a garden.

Some of the plants that participants want to grow may grow better in warmer climates or not be able to grow here. Some crops they might want to grow will be an annual crop here and a perennial somewhere else. For example, Tulsi grows in big bushes in India and is a perennial. Tulsi doesn't grow as big or prolifically here and can't last the winter so it is an annual here.

### Time Frame: 1 hour

2a. Each participant gets a piece of paper and draws a map of what the garden looks like.

- Each participant will write the plants they want to grow on cards.
- As a group they will work together to place where they think the cards should go in the garden.
- Let participants research the plants in books and on their phones.
- All together discuss the placement of cards and whether the plants will grow well together, is it a good position for them? Do they have enough space?
- As a group rearrange the cards for the best arrangement of plants to grow well.
- Draw out the map for planting the next week.

**Activity 3:** Prepare the garden bed for planting, pull weeds, turn soil. Bring weeds to the compost pile.

## Materials needed:

- Rakes
- Shovels
- Trowels
- Wheelbarrow
- Gardening gloves

**Assessment:** What plants do the participants want to grow? How is the garden laid out? Is it circular or square? What are its dimensions? What materials, seeds and seedlings will you need to establish the garden? What are participants observations, stories and relationship to the land? Compile the stories to make into a little booklet to give each participant at the end of the workshop. What challenges are there in establishing the garden?

# **Teaching and Learning Strategies:**

Active listening: Listening is not just about hearing but observing and witnessing everyone's stories and perceptions as well as valuing your own. It is also about listening and observing the natural world: What does the land tell us? What will grow here? How much space do we have to plant? What will be our challenges: Is the soil too wet, sandy, rocky, and/or dry? What are all the different plants the participants want to grow? How long will these plants take to grow? What animals and bugs live near or in the garden?

Leave space for the participants of the workshop to make these observations. This is a continual process throughout all the workshops, but this workshop is about building the foundations to encourage that process.

**Theme:** This workshop is about collectively working together and about responsibility to the place.

## **Curriculum Expectations:**

## **Mathematical and Engineering**

- 1.1 Spatial Awareness developing an understanding of how far to plant things apart.
- 1.2 Planning: developing a blueprint and map of the garden.

## **Physical**

- 2.1 Development of fine motor skills, shovelling, planting, using the wheelbarrow.
- 2.2 Sensory: developing awareness of how the soil feels. Working with the elements, sun, rain, wind, hot and cold.

#### Social

- 3.1 Working cooperatively with each other.
- 3.2 Demonstrate patience and commitment in tasks.

3.3

### **Science and Technology**

4.1 Planning: laying out the garden for the long term. How much space will they need? **Vocabulary:** Companion planting, annual plants, bi-annual plants, perennial plants, spacing, seeds, seedlings.

#### **Resources:**

Grow without a garden: 101 plants for containers by Lara Lucretia Mrosovsky

## Week 2: Plant the Garden and Staple Foods

Question: What are staple foods in your household?

Drawing and writing + share

- Conversation: Stable foods and healthy foundations. Building healthy foundations in the garden. Knowing where your food comes from and how it affects your mood and general health.
- Planting the Garden
- Break
- Continue planting
- Build vine trellis- elaborate

## **Activity Preparation:**

- Make signs- elaborate
- Clean up

Goal: Introduction to the life cycle of plants from planting a seed to collecting seeds.

**Theme/ Question:** What does it mean to each participant to care for the land? Why is gardening important to them?

## **Curriculum Expectations:**

# **Health & Physical Activity**

- 1.1 Investigate staple foods and whole food and healthy things that can be added from the garden we will grow together.
- 1.2 Exercise through gardening: shovelling, wheel barrowing, weeding and play in the garden.

### Science & Technology

- 2.1 Make predictions and ask questions about how the garden will turn out.
- 2.2 Measurement of spacing.
- 2.3 Use of tools.
- 2.4 Demonstrate awareness and investigation of conventional and non-conventional measuring tools and develop methods for using them.

2.5

### **Social Development**

3.1 Demonstrating ability to work as a team take turns and communicate needs.

## **Emotional Development**

4.1 Share experiences and express thoughts.

# **Materials Needed:**

- Seeds
- Seedlings
- Trowels
- Watering cans
- Stakes

• Sharpie markers

## **Activity:**

Planting the garden: direct seeding and transplant seedlings into the garden.

Show examples of the plant in all its phases seed, seedling, first leaves, true leaves, picture of full plant and picture of plants as it is dying back. Describe the different methods of planting. Explain how some vegetables like lettuce, spinach and leafy greens are better direct seeded. Plants like green peppers and tomatoes take longer and need a head start. It is better to start plants in the greenhouse and plant seedlings in order to ensure that they will produce fruit in time for the end of the growing season.

Depending on what was decided as a group to plant, follow the map that was created in the first class to plant the garden.

**Direct seed:** Carrots, Radishes, Spinach, Lettuce, kale, beets beans

Describe the different depths the seeds need to be planted. The depth is determined by the size of the seed for example lettuce seeds need to be only scattered on top of the soil ad lightly covered. Bean seeds are planted one each and deep.

**Transplant:** Tomatoes, Peppers, Squash etc.

**Spacing:** Let the participants work together to figure out how to measure spacing of the plants. They can use their feet, hands, sticks or measuring tape.

Instead of placing plants into rows, stagger the crops, and make nice patterns. As a group decide the shape everyone wants the garden.

**Tomatoes:** 24 inches apart

### **Squash:**

Summer squash 3 to 4 feet apart.

Winter squash should be 4 to 5 feet apart with 5 to 7 feet between rows.

If planted in mounds squash should be 3 feet apart from any plant.

A mound garden consists of corn, beans and squash.

Squash is planted on the outside of the mounds so that it can sprawl out, corn is planted in the middle and beans around the corn. The corn should be planted first and the beans after to ensure the corn has a head start to grow taller than the beans.

**Beans:** In rows 24 to 36 inches apart. Pole beans climb so you want to ensure a structure they can climb up onto. Sew four to six seeds around the stick or pole they will be climbing up on. Beans can also be planted around corn and trellis itself on the corn.

**Carrots**: Draw out a line in the soil with your finger. Sprinkle carrot seeds across the line. Cover with soil. When the green tops of the carrots begin to show, thin out to 1 inch apart. Thin again 2 to 3 weeks later to 3 to 4 inches apart. If the carrots are too crowded, they will not grow big. The more space you give them the larger they will grow.

Radishes: ½ to 1 inch deep and 1 inch apart

**Beets:** Sew multiple seeds in clusters to ensure germination 1 inch deep and 1 inch apart. When tops of beets have come up thin to 3 or 4 inches apart.

**Lettuce:** 12 to 18 inches apart

**Spinach:** 12 inches apart

**Potatoes**: Use the eyes that have grown on old potatoes. Cut the chunk around the potato with the eye on it and plant it in the ground 12 inches apart and 3 feet between rows. Plant on the outside of the garden because they like to fart and release gas into the garden. Potatoes are a stinky neighbour!

**Cabbage:** 12 to 24 inches apart in rows, depending on the size of head desired. The closer you plant, the smaller the cabbages.

**Assessment:** Is the plan for the garden spaced so that the plants will have enough space to grow? Are plants planted together that will complement each other's growth? What are the plants the group chose to garden: how long will it take for each plant take to reach maturity?

**Teaching and Learning Strategies:** Spatial awareness, teamwork, time management, planning, cycles in the garden and cycles in life, making connections, building foundations, building food systems.

**Vocabulary:** Seed, seedling, crop rotation, companion planting, topsoil, biennial, annual, perennial, cover crop, crop rotation, direct seed, hardening off, mulch, organic, no till gardening, root, rhizome, transplanting, germinate, double digging,

**Resources:** Lucretia Mrosovsky, Lara. Grow Without A Garden: 101 Plants for Containers. Mycelium Press, 2019.

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### Week 3: Soil testing

At the beginning of this class prepare the garden beds.

Begin to prepare the garden bed, pull weeds, turn soil. Bring weeds to the compost pile.

Timeframe: 1 hour

**Activity: Testing the PH of Different Soils** 

**Supplies:** 5 different kinds of soil

- Bowls
- Purple Cabbage
- Water
- Pot
- Hot plate
- Popsicle sticks permanent markers for their names
- PH paper

## **Preparation:**

Soil: Have different soils written out on sticks, different pails with different types of soil such as *Clay, Compost, Sand*, and *Loam* etc.

Make a strong tea of purple cabbage and put it in the different soils. Test the soils with PH strips.

**Theme:** This can open the conversation of PH in the body. Have a bowl of salt, bowl of sugar, bowl of milk and combine with the cabbage water and test with PH. Talk about how sugar, salt and dairy interact in the body. Talk about alkalinity and acidity in the body.

"Acidic: Meat, poultry, fish, dairy, eggs, grains and alcohol.

**Neutral:** Natural fats, starches and sugars.

**Alkaline:** Fruits, nuts, legumes and vegetables " (Leech, P.1, 2018).

"The pH value ranges from 0 to 14:

Acidic: 0.0-6.9

Neutral: 7.0

Alkaline (or basic): 7.1–14.0" (Leech, 2018).

Vocabulary: Acidity, alkaline, neutral, PH, tilth

Soil, clay, sand, silt, compost, potting mix, heavy soil, soil testing,

**Activity:** Guessing the soils and testing the PH of different soils

**Questions:** What does the soil look like when it is balanced? What does it look like when it is depleted? What does it smell like? What is its consistency? What colour is it?

**Goal:** For students to develop an understanding of the different soils and how different soils create different growing conditions.

## **Curriculum Expectations:**

## Personal development/ life skills:

1.1 Developing skill in understanding: how food affects the body and general health

## **Science and Technology:**

- 2.1 Determining how different soil conditions affect plants differently.
- 2.2 Analytical skills: determining the PH of the soil based on colour and scientific inquiry.
- 2.3 Developing awareness of how different soils feel, what are their textures, consistencies, visual appearance and smell.

2.4

### **Health Sciences**

- 1.1 Making connections between health and diet
- 1.2 Drawing connections between food and acidity and alkalinity in the body
- 1.3 Drawing connections between colour and nutrients in food

## **Mathematical and Engineering**

- 2.1 Construction of a garden.
- 2.2 Spatial awareness.
- 2.3 Measurement of space and the space between each plant.
- 2.4 Planning and estimation of how big the plants will grow and future planning to accommodate their growth.

**Assessment:** What observations were made about the different soils? What connections were made between plant health and health in the human body based on alkalinity or acidity of soil or food? Did the soils change colour with the purple cabbage tea?

Hand-Out: PH spectrum chart, PH strips

**Resources:** Education.com. "Soil PH: Acid or Alkaline? | Science Project." *Science Project/Education.com*, 17 Dec. 2012, www.education.com/science-fair/article/soil-ph/.

Soil Science Society of America. "What Is Soil?" *All About Soil | Soils 4 Kids*, 2019, www.soils4kids.org/about.

### Week 4 Seed Bombs

- Garden Maintenance: Weeding, Watering 30 minutes
- Seed Bombs 1hr
- Break
  - Share favourite Recipe
  - o Drawing activity: Each participant will draw a picture of a plant that resonates with them.
- Clean up

**Topics:** seeds, soil, emotions, language

#### **Materials Needed:**

- Bowls for mixing seed bombs
- Soil for milk cartons
- Milk cartons
- Permanent markers for their names to label egg cartons with participants names

## **Activity: Seed Bombs**

Combine Soil and Clay together into a mixture. 4 parts soil to 1-part compost

- Add seeds
- Pour a little water on the mixture to make it moist, but not too wet!
- Quickly mix it all together!
- Once it is all mixed roll it into balls.
- Set them in the milk cartons and leave them to dry.
- Label each milk carton with the name of the person who made it.
- Leave in a cool place to fully dry out.

Time Frame: 1 hour

### **Materials:**

- Calendula seeds
- Clay
- A cup of compost
- A cup of clay
- Water

## **Activity:**

Drawing. Each participant will walk around the farm and find a plant that resonates with them. They will sit with the plant and draw the plant and write down their observations about the plant. At the end of the workshop the drawings will be included in the recipe books.

Time Frame: 30 minutes

**Themes:** The importance of gardening and taking care of the earth. Why seed bombs are important- can take over urban space with flowers. Anywhere could be your garden.

**Assessment:** What observations were made about the plants? What plants were chosen? What does this tell you about each participant and their relationship to the farm?

**Vocabulary:** Seeds, compost, aeration, consistency, leaf, stem, root, rhizome, fruit, flower, alternate leaf patterns, opposite leaf patterns, mindfulness, observation, colour, taste, smell, consistency, texture.

# **Curriculum Expectations:**

## **Emotional Development**

- 1.1 Emotions and themes of possibilities, joy and taking up space.
- 1.2 Mindfulness and observation.

### **Science and Technology**

2.1 Experimenting with different consistencies and textures to make the seed bombs. What holds up? How much seed to put in? What is the best ratio of clay to compost?

#### Week 5: Water + Watersheds

**Goal:** To demonstrate how to water a garden and begin to develop the skill of knowing how much and when to water. Learn about water, water systems and water supply. Participants will establish a deeper understanding of where our water comes from.

**Discussion:** Treaties, history of the Humber river and Black Creek, our responsibility to the land and waterways.

## **Curriculum Expectations:**

### **Science and Technology:**

- 1.1 Depth perception
- 1.2 Measurement of water: how much a plant needs, how much water the ground retains.
- 1.3 Observation
- 1.4 Problem solving skills: When to water, how much to water and determining when a plant is getting enough water. Determining how the amount of water changes depending on the weather.

### Social

- 2.1 Making work fun. Incorporating play and beauty into the garden.
- 2.2 Situating self in place and building a relationship with the natural world. Through exploration and observation participants will see where their water comes from.

Questions: What mood does the rain put me in? How do the plants look in the rain? What happens when they are thirsty? What happens when I am thirsty? Where does our water come from?

### **Activity**

Giant Bubbles: Fill a kiddy pool with water and Bubble Solution.

With Wands and hula hoops participants will make giant bubbles.

#### **Materials**

Hola hoops

### Bubble solution:

6 cups water

1/2 cup Dawn original dish detergent

1/2 cup corn starch

1 tbsp baking powder (not baking soda)

1 tbsp Glycerine

Time Frame: 30 minutes

# **Activity:**

- Watering. This activity is to demonstrate how to water a garden. Fill an 8-inch pot full of very dry soil.
- With a hose get the workshop participants to test out the different settings.
- Demonstrate flooding the soil, how the water runs through and doesn't reach the roots of the plants.
- Show how mist is a good setting for baby seedlings because it doesn't uproot or harm the plants. Each participant will mist and see how long they need to focus on a specific area so that the water can reach the bottom of the pot and roots of the plants.
- Talk about how plants want to reach deep so they can grow tall: that's why you water the roots of the plants not just the surface of the soil.

### Materials needed:

- 8-inch pot for each participant
- Soil
- Hose

Time Frame: 30 minutes

### **Activity:**

Follow the black creek. Each participant will draw pictures and take notes about what they observe of the river and the surrounding plant and animal communities.

## **Prompting Questions:**

What sticks out the most to each participant about the watershed?

Where does it start? How high is it? What are the plants that grow around it? What is the significance of this watershed? What are the waterways? What is the consistency of the soil? What birds and animals live here? What plants grow here?

Time Frame: 1 hour

### **Materials:**

- Notebooks
- Pens

**Assessment:** What were the connections made between observing the watershed and where our water comes from? Did participants develop an understanding of how much and when to water?

**Vocabulary:** Watershed, water conservation, rain barrels, water catchment systems, discharge(the amount of water flowing), drainage basin, drought, drainage basin, endangered species, environmental impacts, evaporation, filtration, groundwater, habitat, irrigation, runoff, precipitation, reservoir, reservoir, water cycle, water table.

# Week 6: Climate Change and Bugs

**Goal:** Communicate the impacts of climate change and how it affects the garden, the earth's natural cycles, bird and bug populations.

**Theme:** Supporting and protecting the health and well-being of animal populations, ecosystems and interdependence with nature.

## **Climate Change**

Because of climate change there is more extreme weather like hurricanes, floods, tornados and storms. This has forced birds to relocate or change their migration patterns. This also means their food sources have altered and threatened. Making bird feeders helps support the birds.

### **Materials Needed:**

- Molasses
- Pinecones
- Bird Seed
- String
- Plastic knives

### **Activity: Bird Feeders**

- 1 Tie string on top of pinecone
- 2 Cover pinecone in molasses
- 3 Roll pinecone in bird seed. Make sure it is covered and compact.
- 4 Finished! It's ready to hang up and feed the birds!

Time Frame: 1 hour

**Discussion:** Supporting migration of plants, animals and humans, supporting each other in community. Everyone needs to eat!

**Questions:** What is climate change? How does climate affect the soil? How does the changing in climates affect the soil? The water? The animals? How does it affect humans and where they live?

## **Bugs:**

**Discussion:** What bugs are there here? What do they do? Are they helpful or harmful to the garden? Because of climate change the winters are not cold enough to kill off bugs, so bug populations are multiplying. The natural patterns and cycles of life and death have been disrupted this has led to more predators as well as funguses and diseases on plants. Bugs have also become resistant to pesticides and herbicides, creating super bugs.

**Activity:** Scavenger Hunt: Find bugs on the farm. Provide pictures of the bugs and let the participants wander around the gardens and farm to look for the bugs in the pictures.

Time Frame: 1 hour

# **Curriculum Expectations:**

### **Science and Technology:**

- 1.1 Assessing the different bugs and how they affect the garden.
- 1.2 Examining different weather patterns.
- 1.3 Predicting the different impacts climate change will have on the environment (bug, animal and plant populations).
- 1.4 Intro to resistance to chemical pesticides and the changing anatomy and resilience of bugs.
- 1.5 Observation: identifying different bugs and making connections between the bugs and their impacts in the garden.

1.6

#### Social

- 2.1 Making connections between how climate change effects the food systems, ecosystems, animals and bugs.
- 2.2 Working together to identify bugs, what they do and the conditions they like to live in.

**Assessment**: What are the answers participants came up with around the affects and impacts of climate change?

# **Teaching and Learning Strategies:**

**Vocabulary:** Climate change, seasonal shifts, draught, flooding, natural disasters, food security, migration.

#### **Resources:**

Worland, Justin. "What 1,500 Bug Species Tell Us About Climate Change." *Time*, 2 Nov. 2015, time.com/4096623/insects-climate-change/.

"Resources | Climate Kids." Climatekids, 2019, www.climatekids.org/resources.

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## Week 7: Harvesting + Eating a Rainbow

# **Activity 1:** Harvest

Go around the garden and harvest what needs to be harvested. Explain the differences between harvesting leafy greens and root vegetables. Show the techniques to harvest greens. How to harvest tomatoes and dig potatoes.

Take time for observation and examine the plants. Are they ready to harvest? How much do they take? If the plants are not ready to harvest explain why, how much longer it will take and what they should look like.

## **Activity 2:** Second planting of spinach/ salad greens

Talk about succession planting and multiple harvests.

- 1. Clear a shady spot in the garden bed
- 2. Participants will sprinkle salad and spinach on the surface of the soil.
- 3. Sprinkle soil on top
- 4. Water
- 5. Label

Time Frame: Half hour

**Materials:** Shovels, baskets, scissors, bags to take vegetables home.

**Goal**: Teach about the different cycles and seasons in the garden. This activity is for participants to see the results of their hard work and enjoy the fruits of their labour.

## **Curriculum Expectations:**

### **Science and Technology:**

**Analytical Skills:** Assessment and observation to determine if the plants are ready to harvest

## **Physical**

1.1Use of fine motor skills to dig, harvest and collect.

### **Personal development:**

2.1 Continuity and commitment with the garden.

2. 2 Commitment to the project to the end of the cycle.

## Social/Psychological

3.1 Making connections between the cycles of the garden seasons, emotions, changes, growing, aging, maturity

## **Language Development**

- 4.1Use language participants have learned to talk about the progress of the garden
- 4.2 Describe personal experiences and personal observations of the garden

**Assessment:** How did the plants do? What had the biggest harvest? What were challenges in growing this season? What plans could have done better?

**Vocabulary:** Harvest, yield, seasonal change, second seeding, fall planting, crop, seed to table, seasonal change, fruit, growth, gather, collect

#### **Resources:**

Leah. "Eat a Rainbow Nutrition Activity." *Eat a Rainbow Nutrition Activity*, 2016, www.superteacherworksheets.com/blog/eat-a-rainbow-nutrion-activy-.

### Week 8: Making Salad and Potluck with family recipes

Each participant will bring a dish that is made from a family recipe. This is the last workshop at the end of the workshop each person will receive a recipe book that also has copies of the drawings and writings. As a side dish serve the salad.

### **Activities:**

- **1. Place mats**: cut pictures out of magazines, participants take photo self-portraits and put them in the middle of the placemats. Place mats will be placed around the picnic table for them to eat off.
- 2. Prepping food so their parents can have salad with them.
- 3. Harvest lettuce, greens and vegetables they grew from the garden to make a salad.
- 4. Wash the greens. Chop up and prep the vegetables. Combine in a bowl.
- 5. Make salad dressing.

## Salad Dressing Recipe:

## **Ingredients:**

- 1/4 cup extra-virgin olive oil;
- 1/4 cup pure maple syrup;
- Tablespoon apple cider vinegar;
- 1/2 teaspoon salt or to taste;
- 1/4 teaspoon black pepper or to taste.
- 6. Set the table with the dishes and placemats.

7. Eat and share of pictures and stories of what each participant knows about the land the plants and how it relates to them and their lives.

**Set Up:** Prepping station: cutting boards and sharp knives.

Hand washing station: Basins with warm water. Hand soap and hand towel.

#### **Materials:**

- Basins with water
- Hand soap
- Cutting boards sharp knives
- Hand crank for salad dressing making.
- Oil
- Apple Cider Vinegar
- Salt
- Pepper
- Maple syrup.
- Cutting boards
- Sharp knives
- Bread knives
- Forks
- Bowls
- Napkins

Area: Emotion, Social, Community

**Goal:** Supporting a sense of community with each other. Sharing of knowledge and insights about the land.

## **Curriculum Expectations:**

#### Social:

- 1.1 Reflect on their time in the garden.
- 1.2 Tell stories about their recipes and the cultural importance of food to them.
- 1.3 Ability to communicate thoughts and ideas.

**Assessment:** What was the overall response of the group? How did the recipe book come out? Was the meal well received? What were the stories that were shared?

At the end of the sessions the garden will continue and is open for the participants to harvest whenever they like.



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