Every Child Outdoors Education Program Framework

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Land Acknowledgement

The ***rare* Charitable Research Reserve** stewards over 1,200 acres of land, but we are not the first to do so. Most of the land currently in our care is located within the Haldimand Tract, which spans six miles on either side of the Grand River and is the territory of the Onkwehon:we Peoples of the Six Nations of the Grand River. It is also territory of the Mississaugas of the Credit Anishinaabe First Nation. In addition, we steward land at the border of the Upper Canada Treaty No. 3 and Treaty 19 from 1818 which is also territory of the Mississaugas of the Credit Anishinaabe First Nation. We honour and respect the sovereignty of these First Nations and their ancestors. The lands we steward are home to many other First Nations, Métis and Inuit who have moved to the area from across Turtle Island.

As a settler-founded and -led organization, we make this land acknowledgement in admission of the cultural and historical harm inflicted by settlers on Indigenous Peoples that has led to generational trauma and systemic injustices that persist to this day, including the dispossession of land. We acknowledge that the lands we live on, work on and derive benefit from were taken away from the original stewards, and it is our goal to restore that connection and to work towards building ethical, reciprocal relationships with the local First Nations of the lands where ***rare*** is situated.

We commit to learning about and acting on our responsibilities as settlers of these lands and unlearning our cultural and historical biases that contributed to making these systemic injustices possible in what we now call Canada.

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Photos: **(Cover)** Cordelia Swant holds up a radish grown at Springbank Farm. This photo was taken in July 2018 by Stephanie Sobek-Swant; **(Background)**: Kindergarten students visiting ***rare*** go on a snowshoe hike. This photo was taken in February 2023 by Sam Pharaoh.

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Executive Summary

This framework is a roadmap for the *Every Child Outdoors* program, that will show where we want to grow, what we need to confront, how we plan to do so, and most importantly, why it is we need to make these changes. This report discusses in detail the principles that *Every Child Outdoors* are rooted in, the strengths of existing programs upon which we will continue to build, and the areas where we want to scale up, revise, and continue to reflect how to best improve services and meet community needs.

Guiding Principles

1. Hands-on learning: Creating life-long learners and stewards of the environment;
2. Fostering appreciation: Instilling a sense of wonder and a love of nature in all;
3. Undoing separability: Demonstrating the human interdependence and connection with nature and all living things;
4. Holding space: Increasing a sense of belonging and safety in outdoor spaces for all members of the community, especially those who have not previously felt included in our work and such spaces;
5. Un-learning and decolonizing ourselves: Understanding settler responsibilities in what is now called Canada, and the colonial histories and current systems environmental organizations and educational institutions and frameworks are embedded in, working towards the braiding of Indigenous and Western knowledge systems.

Proven Successes

1. Immersion: hands-on, land-based learning experiences in nature;
2. Versatility: programs have multiple Ontario curriculum links;
3. The ***rare*** Chain of Learning: diverse role models and access to cross-generational exchange of knowledge and experience;
4. Emergence: opportunities for natural curiosity, artistic experience, and exercise;
5. Accessibility: Freely accessible virtual content.

Areas for Revision, Reflection, and Growth

1. Local access: Expanding ECO programs to new lands, partners and protected areas, where appropriate;
2. Equitable access: Securing low to no cost transportation to sites and program sponsors;
3. Scaling up: Serving a larger number of youth and community learners;
4. Returning visits: Fostering a relationship to place by increasing the number of repeated visits;
5. Settler responsibility: Continuing to engage in truth and reconciliation conversations and actions.

Photos: **(Left)** Walking ***rare's*** trails during ECO Summer Camp 2023; **(Below)** Introducing ECO Campers to ***rare's*** unofficial mascot, the painted turtle Top Hat. These photos were taken by Michelle MacMillan.

Introduction

Since its inception in 2003, thousands of students have participated in curriculum-linked youth environmental education programs at ***rare***, called *Every Child Outdoors* or ECO. This name reflects our belief that every child should have the opportunity to be outdoors in a safe natural environment, guided by strong role models that promote an enthusiasm for learning and caring for our planet. *Every Child Outdoors* allows children and youth to explore large tracts of protected natural landscape supporting many unique and globally ***rare*** habitats that are home to diverse flora and wildlife. There are enormous physical, mental, and spiritual health benefits for children who build interest and bond with nature, including feeling a greater sense of purpose in life and a stronger sense of belonging to a community, in both a local and global sense (Kaplan, 1995; Louv 2008; Suzuki 2017; Dietze 2016; James and Williams 2017).

By recognizing Indigenous peoples as the first leaders of conservation and acknowledging the historical, current, and persisting effects of colonialism in Canada, and committing to a path of learning and unlearning in this context, ***rare*** creates an emphasis on living together in reciprocity with nature (Kimmerer 2015). This is based on our belief that sustainability is an attainable goal that can be reached if we recognize people as part of the environment and work together towards responsible stewardship. Our commitment to fostering environmental stewardship in future generations has a natural link to ongoing efforts to decolonize ***rare's*** approach to education as "Indigenous worldviews already include an inherent recognition of the land and the connectedness of all beings" (Lowan-Trudeau, 2012, p.115). The Sustainable Development Goals outlined by the United Nations demonstrate a plan of action to move the world onto a sustainable and resilient path, and *Every Child Outdoors* programs act on multiple calls to action such as (4) Quality Education, (3) Good Health and Well-Being, (13) Climate Action, and (15) Life on Land (United Nations, The 2030 Agenda).

In the national bestseller, *Last Child in the Woods* (2008), author Richard Louv coined the term Nature-Deficit Disorder (NDD) to describe modern changes in Western urban, predominantly euro-centric culture that have resulted in children spending less time outside and in nature, both a cause and consequence of increased global urbanization since the late nineteenth century (Profice, Santos, and dos Anjos 2016). This lack of contact with nature negatively impacts children's physical and emotional health and well-being and may impact their compassion and commitment to living their adult life in reciprocity with the planet (Louv, 2008). Indigenous leaders point to the deliberate disconnection of people from land as a source of ongoing trauma and strain, with land-based learning being an opportunity for cultural healing and inter-generational knowledge transfer (Wildcat et al. 2014; Bowra, Mashford-Pringle, and Poland 2020; Redvers 2020).

For non-Indigenous people, reconnection may be an opportunity to re-evaluate their relationship with land and one's own role and responsibility as a global citizen. Research shows that people more connected to nature are more likely to feel a sense of personal responsibility towards it and demonstrate positive environmental behaviours (Zelezny & Schultz, 2000; Geng at al. 2015; Gosling and Williams 2010; Braun & Dierkes, 2016; Suzuki, 2017). Child and youth programs that focus on building this lasting feeling of connectedness are therefore important both in engaging with truth and reconciliation and in building an eco-literate society where people live in reciprocity with the planet and no longer suffer from the effects of separability, from each other and nature (Andreotti, 2021). The most often cited approach to build connectedness is experiencing nature activities in childhood and youth, with parents, teachers, or other role

models who demonstrate an interest in nature (Ernst and Theimer 2007). A US-based study found people with positive childhood nature experiences such as playing in the woods, planting trees, and gardening, grew up to care more about the environment than those who did not have those childhood experiences (Wells and Lekies 2006).

Immersive outdoor activities are especially important for fostering nature connectedness and effects of these programs may be more long-lasting if targeted to younger students (Liefländer et al. 2013; Sellman and Bogner, 2013; Larson, Castleberry, and Green 2010). Braun and Dierkes (2016) write "environmental attitudes develop early and are harder to modify as children grow older". The frequency of time spent in nature is also an important factor, with repeated or long-term experiences more likely to lead to positive change in both environmental outlook and social and cognitive skills (Ernst and Theimer; Nikkhou & Tezer 2020 and references therein).

Through its *Every Child Outdoors* programs and the expanse of land and trails available, ***rare*** is in a unique position to help facilitate this nature-child reconnection in Waterloo Region and the surrounding areas. Working towards the braiding of Indigenous culture and knowledges through education programs enables a multi-pronged approach highlighting local knowledge that supports a goal of getting everyone "to care enough to create harmonious relationships with the Earth and with fellow human beings" (Herbert, 2008, p.63).

Fostering this deep connection with nature and getting students to care about the environment requires more than a theoretical approach or just being outdoors. For learning to be effective and have a lasting impact, students must have learning experiences that are tactile, hands-on, and deeply meaningful (Ernst and Theimer 2007).

At ***rare,*** we can offer experiences that build a lifelong love of nature as well as empower students to make a positive change in the world by inviting them to have physical interactions with nature and experiencing true land-based learning. **Research suggests that environmental education must be coupled with local nature connection in youth to avoid a disconnection from abstract global environmental problems** (Wilson, 2011; Sabet, 2018). Sabet (2018) argues that ″without the initial caring connection developed, children and youth will "tune out" problems they feel disconnected from, or feel helpless to engage in."

In other words, broad-scale environmental issues are best understood by youth when experienced locally, for example making connections between the global waste crisis and local litter clean-up efforts, food scarcity and local gardening initiatives, and wide-spread habitat loss and destruction with local restoration projects and tree-planting. Through place-based local environmental education programs/projects, youth can develop their sense of the public realm more broadly and their stake in their local communities. Flanagan et al. (2019) documented reflections of 205 children and youth in grades 4 to 12 from urban communities after their participation in place-based stewardship education projects. After completing these projects, many students described how they felt they made a mark on their community and started to not only see themselves as part of their community but also recognized the responsibilities they had towards it. "It was important for me to work and be a member of the "Eco Team" because it helped me believe in my community. At first, I really didn't care about my surrounding but working with the "Eco-Team" made me realize I need to do something about it. Also, my community changed a lot because it looked better than it was before I started being in the community" (Flanagan et al., 2019).

To this aim, the ***rare*** **Charitable Research Reserve** offers Ontario curriculum-linked education programs available for K – 12 students including opportunities to participate in local conservation efforts and specialized Mirrored Research programs — programs that allow students to "mirror" the research and monitoring activities conducted on ***rare*** lands. Our school-based and youth environmental education program trains future generations of conservationists by providing children with the tools and the desire to become great environmental leaders of tomorrow. Education opportunities extend to post-secondary and adult learners through custom field trips, community events, and more. All these programs are reflective of the ***rare*** *Chain of Learning* – allowing for the cross-generational exchange of knowledge and experiences among learners and teachers.

Photos: **(Left)** An ECO Camper gently holds a praying mantis; **(Below)** Identifying moths and butterflies at ECO Camp. These photos were taken by Michelle MacMillan.

Histories of the *rare* Lands

The ***rare* Charitable Research Reserve** is located within the Haldimand Tract that spans six miles on either side of the Grand River from source to mouth, land granted to the Six Nations in 1784 to recognize their support for the British in the American Revolution. This land has been rich in diverse Indigenous presence since time immemorial, supported by archaeological evidence of the Neutral Peoples dating back 10,500 years.

The ***rare*** lands are one of the few places in the Grand River Basin where deposits from the last ice age can be found in the exposed bedrock (Burtt 2018). The presence of fossils such as corals and clams indicate that millions of years ago, ***rare*** was covered by a shallow, warm equatorial ocean. As the ice sheets retreated 11,000 years ago, the first humans to inhabit southern Ontario, the Upper Paleolithic peoples, arrived in the area. They are believed to be highly mobile peoples who likely hunted on land that is now a part of ***rare.*** Over the next 8,200 years, the land and the animals inhabiting it changed due to a changing climate. The tundra-like habitat transformed from grasses and stunted black spruce trees to forest, now including the northern range of the Carolinian forest. Around 1,000 years ago, the Neutral people began building semi-permanent farming communities, of which the Grand River floodplain, near present day Blair, was one (Burtt 2018).

The "Dish With One Spoon" and other similar treaties have long been used since time immemorial by Indigenous peoples in what is now Ontario to describe how the land and all its resources are shared amongst all its inhabitants. (Lytwyn, 1997). It acknowledged that by sharing territory, different people were eating out of the same dish, and thus all sharing the spoon were responsible for taking care of it (Simpson 2008). This represented a treaty between not only people but with nature itself, and included taking into consideration the impact on all plants and animals and the next seven generations. (Nahwegahbow, 2014). This concept was used as the foundation of a peace treaty between the Haudenosaunee and the Anishinaabe Nations, who understood the treaty as a relationship that required regular renewal through meeting, ritual, and ceremony and one that came with both rights and responsibilities.

In 1613, the Haudenosaunee made the first agreement with a European settler nation, called the Two Row Wampum (Teioháte Kaswenta in Mohawk, and Aterihwihsón:sera Kaswénta in Cayuga) (Hill 2013). This agreement between the Haudenosaunee and the Dutch was based on three principles: friendship, peace and forever (Maracle 2015).

Peace not just between the different nations, but the whole circle of life – the animals, birds, water, fish, plants, grass, trees, moon, stars, and the thunder (Jemison & Powless 2000). This treaty was later extended to other European nations such as the English and French.

Over the 1600s and 1700s, The Haudenosaunee made several treaties and agreements including the Great Peace Treaty and the Nanfan Treaty. These treaties made peace with many other Indigenous Nations and European settlers. The Nanfan Treaty put the lands of the Great Lakes in protection of the British while giving the Haudenosaunee continued hunting and fishing rights (Ramsden 2006). In 1777, the Haudenosaunee supported the British and the Loyalists during the American Revolution, and as a result, they lost their homes due to rebel settlers burning many of their towns. After the war, many Haudenosaunee settled on lands alongside the Grand River, made possible through the purchase and transfer of the Haldimand Tract to them by the British Governor Frederick Haldimand. This land grant included lands that are now under the stewardship of ***rare.*** This history reminds us that treaties are a foundation of society in what is now called Canada, and that all people living in Canada are treaty people with rights and responsibilities. Understanding the colonial history of the country and our role and responsibilities as treaty people is an important step toward meaningful reconciliation.

In 1835, about 230 acres of land along the Galt-Blair Road, including some of what is now ***rare,*** were purchased and promptly sold two years later to Matthew Wilks. This is the same year Lamb's Inn, the location of ***rare's*** main office since 2005, was built. It was one of the first stagecoach inns constructed in Upper Canada. The Wilks family grew the estate over the years until it was ultimately gifted to the University of Guelph, which took possession of it in 1973. Wilks Keefer's original vision was for the university to conserve the property and use it for research and education, particularly agricultural research. In the mid-1990s, the University of Guelph explored opportunities to sell the lands, and in 2000, with funding from concerned citizens, 913 acres were purchased as part of a new community-based conservation strategy. In December 2001, the charity was incorporated with the goal to grow into a land trust and environmental institute, and by February 2001 the land transfer was completed, allowing the 900+ acres to be preserved in perpetuity. The Lamb's Inn building and accompanying 3 acres were purchased in 2008 and an additional 93 acres were purchased and protected in 2010 adjacent to existing ***rare*** lands. Since then, the organization has grown to steward over 1200 acres in various locations across Waterloo Region and Wellington County.

The original ***rare*** property is located within the City of Cambridge and the Township of North Dumfries both of which are a part of the Waterloo Region. As of 2022, the population of Waterloo Region is 647,540 (Statistics Canada 2021). Since 2011, the population of Waterloo Region has grown by 5.5% and is expected to continue to increase to an estimated 742,000 people by 2031 (Ministry of Municipal Affairs and Housing 2019).

Photos: **(Left)** Cliffs on ***rare*** lands at the edge of the Grand River. This Photo was taken by Norm Lightfoot in 2014; **(Above)** ***rare's*** historic Slit Barn. This photo was taken by James Bow in November 2021.

History of Education Programs at *rare*

In spring 2003, ***rare*** piloted environmental education programs with several classes from elementary to post-secondary levels. At the time, with over 180 schools and nearly 80,000 students to serve, outdoor environmental centres were simply unable to support the number of students within the Region, and this continues to be an issue to this day. Supplemental outdoor education programs were offered by the Grand River Conservation Authority (GRCA), but even with that support, hundreds of classes were being turned away from outdoor environmental education experiences. Feedback from this pilot informed what was most needed and desired by teachers and students: experimental, science-based education programs that ask the question 'why?'.

Building from the success of this pilot, ***rare*** partnered with Southwood Secondary School's newly established Environmental Magnet Program. Through this partnership, students completed environmental restoration projects at ***rare*** while working alongside researchers and educators. The high school students then acted as mentors and developed short modules for the youngest elementary students to experience. This grew to include Rockway Mennonite Collegiate and, over two years, more than 10 acres of conventionally farmed lands were restored, and 900 trees were planted by participating students. From this success, the ***rare*** *Chain of Learning* was born and officially launched in 2006. The ***rare*** *Chain of Learning* provides hands-on experiential learning opportunities to everyone, from the youngest students to the oldest community members, inspired and informed by on-site monitoring, research, and restoration projects. Students are further encouraged to not just learn but also teach, passing on the knowledge gleaned down the ***rare*** *Chain of Learning* to their families, schools, communities, and younger learners.

In 2008, ***rare's*** first Education Director was hired and began development of inquiry-based, hands-on, curriculum-linked environmental education programs in the out-of-doors for grades 2-12. After consultation with the local schools, school boards, GRCA, and other community educational organizations, the *Every Child Outdoors* environmental education program officially launched. Recognizing that time in the outdoors has been shown to dramatically improve the health and well-being of children, the name *Every Child Outdoors*, or ECO for short, was chosen to describe ***rare's*** commitment to delivering curriculum-based environmental education in the out-of-doors and to reflect our aspiration for children and youth everywhere.

Renovation of the *Every Child Outdoors* (ECO) Centre – a 1840s limestone Slit Barn and companion farmhouse – was completed in 2012. This four-season hub of education and research offers classrooms, lab space and accessible washrooms, as well as facilities for camp programs, events, and overnight accommodation for visiting scientists,

Indigenous Knowledge Keepers and other guests of the organization.

Having purpose- built facilities like the ECO Centre also enabled the organization to offer additional programs. In 2012, ***rare*** further expanded the educational opportunities beyond Ontario curriculum-based programs by offering summer and march break ECO day camps, following a one-week pilot in summer 2011. These day camps offer a unique opportunity for those aged 6-12 to establish meaningful community and place-based knowledge and relationships. Learning directly from the land alongside educators, researchers, artists, and knowledge keepers, ECO Campers experience a learning environment that fosters of a sense of respect for their own and others' physical, cognitive, emotional, and spiritual well-being – all while spending the majority of the time outside, on the land. In summer 2022, an ECO Teen Weeks was piloted for campers aged 12-16 to provide additional and more advanced outdoor learning opportunities and experiences. With demonstrated interest and positive feedback, it has continued in 2023 and we will explore opportunities for future growth.

Since then, programs have continued to grow to match the needs of K-12 educators with the Ontario curriculum and ***rare's*** educational principles in mind. Specialized Mirrored Research modules were developed to provide opportunities for students to "mirror" the research and monitoring activities conducted by staff and researchers on the ***rare*** lands and across the country. Learners are immersed in the scientific process, asking questions, making observations, analysing and interpreting the results and ultimately forming conclusions and connecting lessons learned to broader environmental topics. These programs can be modified to create Mentorship Mirrored Researched modules, where secondary students are trained on specific monitoring and research methods and then use these techniques to guide elementary students through the same activities in a mentorship-based approach.

In 2012, Canada's award-winning entry to the 2009 International Solar Decathlon, North House, found a permanent home at ***rare,*** and corresponding education modules were developed in the years that followed. North House is a living lab for sustainable design and technology that generates more energy than it consumes through solar thermal generation, solar photo-voltaic generation, and geothermal cooling. Students and the general public learn about compact, sustainable living using this working model of green technology. The building is also home to ***rare's*** Eastern Comma Artists-in-Residence program, which now has a specific focus on Indigenous artistic inquiry.

Springbank Farm and Community Garden is another significant location at ***rare*** that supports educational initiatives. Along with 110 community garden plots, a Food Bank garden and orchard, Springbank Farm hosts an education and demonstration garden. The gardens serve as important habitat for pollinators while providing a space for education and community belonging. School groups and ECO campers visit the gardens to learn about sustainable food systems, organic agriculture, healthy living, and pollinators. A parking lot and trail leading to the gardens were built in 2016 on the south side of Blair Road, across from the ECO Centre, which makes it easier for school buses to access this location.

In response to the COVID-19 pandemic, ***rare*** piloted a one-day-a-week, 8-week-long Nature School in fall 2020. The pandemic showed a clear need for smaller, safer outdoor education experiences in our community, which ***rare*** could provide. Nature School offered a safe and engaging alternative to classroom or virtual learning for 25 children aged 6-12 over four terms. Focusing on environmental education and hands-on inquiry, this fully outdoor program allowed children to engage and interact with the local environment through art, exercise, and exploration. In fall 2022, with students returned to classrooms and field trips resumed, Nature School shifted to PD Day ECO Camp to best meet the needs of the community.

Over the last twenty years, ***rare*** has also supported learning opportunities for post-secondary students from local universities and colleges as well as offered numerous community events including bird counts, seed saving, bioblitzes, owl prowls and more. With over 20,500 students and youth participating in *Every Child Outdoors* programs since its inception, ***rare*** has a proven track record of successful environmental outdoor education through its school programs and camps, which build knowledge and a sense of wonderment in everyone involved, from the most senior teachers to the youngest students and the community alike. Our commitment to getting children outdoors has provided 150,000 hours that students and youth have spent outside on the ***rare*** lands since the program's inception.

Twenty years later, the need for outdoor education in Waterloo Region has only grown. The number of schools and students have increased, and conservation authorities have been provincially mandated to refocus on resource management over education. This means less capacity for outdoor learning opportunities for the 90,000+ students in the Region, and demonstrates the continued need for *Every Child Outdoors*. Increasing amounts of time children and youth spend behind screens and years of social isolation throughout the pandemic makes giving them more opportunities to unplug and reconnect in nature even more relevant.

Photos: Southwood Secondary School students pose beside their Earth Day Cleanup haul in 2006. The photographer is unknown.

Framework Goals

While this Framework stands as a marker of the development and history of education programs at ***rare***, and its underlying pedagogies, it is also a roadmap to chart our desired course and to help communicate our direction of growth and development. This Framework will show where we want to grow, what challenges we need to confront, how we plan to do so, and most importantly, why we need to make these changes.

From the beginning, ***rare's*** environmental education programs have been rooted in the belief that people who spend time in nature will care more for nature, treat wildlife, nature, and each other with more respect, and make informed decisions that consider future generations. These ideals were intrinsically imperative in the development of *Every Child Outdoors*, and they continue to be guiding principles that impact both program creation and facilitation. However, we have come to learn and acknowledge that there are additional definitions that must be added to clarify these beliefs, the underlying pedagogies, as well as include diverse voices and perspectives that were not taken into consideration when *Every Child Outdoors* and the ***rare*** *Chain of Learning* were conceived originally.

Historical and present-day barriers exist for many people such as newcomers to Canada, 2SLGBTQ+ community members, Black, Indigenous, and other racialized people, and people with disabilities. Originally, these communities and people were not explicitly addressed in our programs, nor were needs identified by working directly with members from these groups. Additionally, the original emphasis on the scientific process and method left art, social sciences, and other disciplines at the periphery of our focus — not excluded, but not as actively engaged and uplifted in the same way as applied scientific approaches to world- and place-making, and not as strong a component of the education program compared to the inclusion of these disciplines in other areas of the organization. Over the years, particularly as we continued to grow our Eastern Comma Artist in Residence program with Musagetes, a lot of artists staying on ***rare*** property have made meaningful contributions that have elevated the education program and brought us closer to realizing a vision where different ways of being and world views come together to create something new and unique. We continue to have a lot of room to grow and we are committed to learn from any failures and missteps that may occur along the way.

Because of ***rare's*** organizational identity as a research institute and land trust, the traditional western, euro-centric, scientific model of environmentalism has had a great impact on early ECO programs and this culture can be traced through the department's history. Acknowledging this about our past continues to be a process that mandates us to look at our organizational culture as a whole and recognize that though many of our actions may have been well-intended, they did not take into account the perspectives and knowledge of the original stewards of the land on which ***rare*** resides.

The vision of overcoming separability, though originally approached from a settler gaze and with a Western scientific lens, has allowed for common ground on which to open dialogue with Indigenous community members. These conversations and relationships have helped guide the organization in a new direction, one not rooted solely in the Western scientific model of environmentalism, but one that strives towards equally considering, valuing, and holding space for Indigenous knowledges, perspectives, and ways of knowing and being.

As educators, we recognize that the Canadian government through the Indian residential school system, the Indian Act, and other oppressive policies has taken First Nations, Métis and Inuit languages, customs, cultures, and communities from them and we recognize that we have a responsibility to change the current education system, which was founded on and still perpetuates systemic colonial harm. One such harm is the practice of speaking for Indigenous peoples rather than working with them. We recognize that we, too, have a lot of work to do ourselves, to learn and unlearn, and in what we teach our students, both in terms of content and through our own actions. We recognize that Indigenous peoples have a deep connection with the land and as a result hold valuable knowledge

about the land and its surroundings that have been passed down since time immemorial. This knowledge is not for us to share, extract, instrumentalize or appropriate. We also recognize that though we are not experts and may be afraid of perpetuating stereotypes or appropriating Indigenous knowledge, doing nothing will continue to perpetuate the systematic oppression of Indigenous peoples. We also recognize that we must be careful in making sure we are appreciating Indigenous cultures and knowledges and not appropriating them, by fully learning about, understanding, and acknowledging the meaning behind the customs, symbols, and other knowledges we share with our students, and preferably stepping aside so any sharing of such knowledge can be Indigenous-led. We also recognize the importance of relationship and that while on this journey of decolonizing our education system we must work with Indigenous Elders, Traditional Knowledge Keepers, and other Indigenous partners to revise our pedagogy and curriculum. This includes holding space for Indigenous and non-Indigenous participants to learn directly from Indigenous people, with an understanding that not all knowledge is ours to possess or share.

While this is not an easy task we have before us, it is one that we feel must be undertaken with appropriate pacing, including allowing ourselves room for learning from mistakes, and with this Framework, we will share our journey of updating and working towards braiding knowledges and ways of being in ***rare's*** education program. We hope to share where we have succeeded, but also where we have failed, and will be transparent with our own mistakes and missteps.

Photos: **(Left)** Eastern Comma Artist in Residence Alexandra Gelis leads ECO Campers in a paper-making project; **(Below)** ECO Campers prepare to catch and observe insects. Both photos were taken by Michelle MacMillan in the summer of 2022.

Our Vision

Our Goals, Guiding Principles and Values

The goal of the ECO Program is to provide opportunities for people of all ages to learn about and connect deeply with the local environment. We believe to be interested, curious, engaged and feel connected with nature, one needs to actually ***experience*** nature. Therefore, our primary objective must first be to get people outdoors! By empowering people with knowledge and meaningful opportunities to get outside and experience nature, we can set the stage for meaningful nature connection to take place.

In Canada, we have the great privilege of vast outdoor space, and this wild landscape has shaped a culture that has been greatly influenced by the outdoors and outdoor activity. Canada is often associated with symbolism deeply rooted in nature including the Great Lakes, Rocky Mountains, charismatic wildlife like the beaver and moose, and the maple leaf. But it would be a mistake to think that this dominant cultural narrative, told through a predominately affluent, euro-centric, white, cis-heteronormative lens, is inclusive, enables equitable access, and makes everyone comfortable and safe in these spaces.

Over 80% of Canadians live in urban population centres (Statistics Canada, 2021), and although there is significant 'greenspace' across Canada, reaching these destinations can be challenging and often impossible for many. Getting equitable access to nature in or near our cities especially affects BIPOC community members who predominantly reside in urban cores (Statistics Canada, 2021) and new immigrants who primarily settle in urban centers (Aizlewood et al. 2006). We are well positioned as an urban land trust to connect with these communities to identify how we can address any needs for near-urban nature access in Waterloo Region and surrounding areas.

A protected area or natural space may be physically accessible and within reach, but ensuring equity-deserving groups can access those areas requires important emotional, social, and cultural considerations. Natural spaces are enjoyed by different people and cultures in different ways, but it is common for outdoor education to rely too heavily on often gear-heavy recreational activities that predominate a privileged white middle-class settler wilderness experience (e.g. skiing, birdwatching, hunting, canoeing). These activities can be valuable and memorable experiences, but they are not universally desirable for everyone and can pose barriers to participation in terms of time, money, and the skill required. Our role at ***rare*** must be to challenge narratives that center on one singular definition of the human-nature relationship and provide diverse opportunities for spending time in nature. Maslow's hierarchy of need demonstrates that for people to fulfill needs of belonging and connection, they first must feel safe in their immediate environment. Ensuring our lands and policies are inclusive and welcoming across a broad spectrum of the population is essential to removing these 'invisible' barriers to making a connection with nature.

Through ECO Programs and other educational outreach efforts such as written and video content, we have an opportunity to embody and share our organization's guiding principles and values. As we look toward the future of ECO, we will hold these principles close so they may continue to be embedded deeply within our programs.

For our education programs, our principles are:

1. Hands-on learning: Creating life-long learners and stewards of the environment;
2. Fostering appreciation: Instilling a sense of wonder and a love of nature in all;
3. Undoing separability: Demonstrating the human interdependence and connection with nature and all living things;
4. Holding space: Increasing a sense of belonging and safety in outdoor spaces for all members of the community, especially those who have not previously felt included in our work and such spaces; and
5. Un-learning and decolonizing ourselves: Understanding settler responsibilities in what is now called Canada, and the colonial histories and current systems environmental organizations and educational institutions and frameworks are embedded in, working towards the braiding of Indigenous and Western knowledge systems.

Previous Program Highlights and Successes

Since inception, over 20,500 students have participated in *Every Child Outdoors* education programs at ***rare***. This represents day campers as well 150+ unique schools or education organizations across six different school boards participating in over 700 programs. Some of the most enjoyed programs include Animals in Motion, Dirt on Plants, Home Sweet Habitat (previously called Cliffhangers), Biodiversity Breakdown, Landscapes in

Transition, and Snowshoe Adventure. While diverse in content, target grade level, and program elements, these popular education programs all include immersion in nature and offer experiential and hands-on learning opportunities. Teacher and student feedback confirms that outdoor learning while hiking through nature is a highly desired and enjoyed program style.

These popular programs are also flexible to meet cross-grade curriculum requirements. This is beneficial for educators teaching a split grade class (e.g., grade 2/3), homeschools, or other non-traditional learning groups as they can be adapted to cover curriculum points for students in multiple grade levels. This overlapping possibility is additionally important as many classes combine to share transportation and reduce field trip costs when attending ECO programs at ***rare.*** The station-style program Animals in Motion is our most popular program by far, not the least because it has the highest class-size capacity. This program allows us to simultaneously engage students from multiple classes from kindergarten to grade 2, and thus can save on transportation costs for schools, students, and families.

Access to expertise and knowledge sharing in the community creates a unique opportunity for *Every Child Outdoors* programs to be differentiated from other nature-based programs. The lands at ***rare*** are a living laboratory for diverse research and inquiry that in turn informs restoration practices and education programs through the ***rare*** *Chain of Learning*. Students, scientists, artists, and knowledge seekers who study, work, or engage with ***rare*** lands through their research are encouraged to share their knowledge and experiences directly with student groups and ECO campers visiting ***rare.*** Youth get to meet and learn from diverse role models, often in immersive and hands-on environments that help demystify the idea of what "real scientists" or "real artists" look like. Weekly guests join ECO Camp to teach, demonstrate, and participate in learning with the campers with an activity based on their expertise and/or research. Mirrored Research programs allow students to "mirror" the research and monitoring activities conducted on the land. Virtual nature-based activities, field trips, and community hikes and presentations all regularly feature or are inspired by ongoing work taking place at ***rare.*** A full list of links and modules, virtual field trips and in school programs offered by ***rare*** can be found in our **Program Guide**.

Some programs, particularly ECO Camps and Nature School, support youth learning and nature immersion via investigation and exercise. Research shows that keeping students moving and active through learning can increase focus, memory, academic performance, and physical health (Finn and McInnis 2013). Incorporating movement and activity into the school day can be challenging for educators working within the curriculum, so there is great benefit to programs that can offer physical activity simultaneously with science, art, or other inquiry lessons.

As we review, revise, and grow *Every Child Outdoors*, we will reaffirm these proven and valued elements throughout our program catalogue.

Photo: **(Below)** ECO Campers explore the shoreline of the Grand River during PD Day ECO Camp. This photo was taken by Michelle MacMillan in June 2023.

Impact and Reach

Every Child Outdoors has direct positive impacts on teacher, student, and youth participants. When provided with early and ongoing positive experiences in nature, children thrive in intellectual, spiritual, and physical ways. There are enormous health and wellness benefits for children who build interest and bond with nature, such as increased physical activity and energy levels, improved balance, increased happiness and well-being, greater resilience to stress, more self-acceptance, greater sense of purpose in life and stronger sense of belonging to a community, in both a local and global sense (Kaplan, 1995; Louv 2008; Ideno at al. 2017; Dietze 2016; James and Williams 2017; Sabet 2018).

Long-term, *Every Child Outdoors* aims to foster a culture of ecological literacy and responsibility and train the next generation of land stewards for sustainable and reciprocal human-nature relationships.

One way we hope to continue this work is by helping teachers and schools to become more comfortable with taking their students outdoors and educating them on environmental topics. Many teachers within our network of educators have expressed a desire to bring more outdoor learning time into their classrooms, but often state a lack of nature knowledge as their main reason for not engaging students in this way. Some teachers take matters in their own hands regardless, which is laudable, but then struggle to provide appropriate oversight and expertise, for example with regard to handling and identifying wildlife or native plants. By helping educators to feel comfortable in an outdoor environment and empowering them with the knowledge and skills to facilitate these natural learning experiences, we can extend our impact and reach far beyond what would be possible with the small education team at ***rare.*** To this end, we are building a library of online educational content that is free and easy to access with nature related activities and lessons. We can also offer support to teachers and schools seeking an EcoSchools Certification (https://ecoschools.ca/).

ECO programs directly connect to schools, students, and community members in Waterloo Region and Wellington County and beyond. In years to come, we hope our program can serve as a model for others working in conservation, protected areas, and outdoor spaces around the country. We will always seek out and be active in opportunities to share our knowledge and experiences and to learn from others and their experiences.

Photos: **(Below)** Learning music at Summer ECO Camp; **(Opposite)** Birdwatching at Summer ECO Camp. These photos were taken by Michelle MacMillan in 2022.

Community Needs

As a community and volunteer driven non-profit charity, it is important that we recognize and work to meet the needs of our community members. Across our community, there are various needs that the education program can strive to address.

Every Child Outdoors was started to combat the increasing prevalence of Nature Deficit Disorder in youth and to provide the immense physical, mental, and cultural health benefits of spending time outdoors. As technology continues to be an ever-increasing part of children's lives from birth, this phenomenon of children spending less time outside and in nature continues to increase. Therefore, there is a continuing need for programs like ours to help reconnect children and nature by providing educational opportunities outdoors in natural spaces as much as possible. By focusing on our guiding principles, proven successes, and areas for revision and growth, we can continue to address this primary need.

Another prevalent need in our community is access to nutritious, healthy and affordable food. As of 2019, it is reported that almost 10% of households in the Waterloo Region are food insecure, meaning they have inadequate or insecure access to food, especially healthy, culturally appropriate, and nutritious food. While our education program is not capable of directly addressing the root causes of food insecurity (i.e., poverty, systemic racism), there are steps we can take to temporarily address this need. By working with our Facilities and Gardens Coordinator, the education team will deepen our educational opportunities at the gardens with revised and updated education modules for field trips and increased visits with ECO campers during the march break and summer. We will continue to foster relationships and co-create accessible learning content and experiences with participation in community initiatives such as the One Seed One Community partnership where thousands of seeds of a chosen vegetable (e.g., beans, peas etc.) are made available to community members free of charge.

Race and Nature in the City (Scott and Tenneti, 2021) highlights some community needs for People of Colour, who are often under-represented in environmentalism and the nature-sector. Guided by the report recommendations, we will develop a module focused on urban ecology that reflects different worldviews and centers the need for humans living in reciprocity with the land. We will include information on environmental careers into youth programs where appropriate to increase exposure to the variety of jobs available in the broad sector of environmentalism. We will be sure to include diverse role models and representation, so all students have an opportunity to see themselves in these roles. We will adopt a train-the-trainer model for nature-based activities to empower leaders from diverse communities with the confidence, comfort, and/or skill-set to guide hikes and activities. Research shows that Black, Indigenous and other People of Colour, particularly youth, would be more willing to explore and spend time in nature if these opportunities occurred in their neighbourhoods and/or when led by people from their community. While working to reduce barriers for traditionally under-served and under-represented people, we must also remember to create accountable spaces where everyone treats one another respectfully and with kindness, as well as the nature around them.

Access to outdoor education spaces and Indigenous education is a barrier for many teachers within our community. Our programs and travel subsidies already work to address this need but can be expanded to reach a greater number of teachers. Another need in our community we can address is educating parents and teachers on confidently delivering nature education. We can work with other outdoor education and environmental groups such as the Council of Outdoor Educators of Ontario, Ontario Society for Environmental Education, Science Teachers Association of Ontario and the Outdoor Learning Store to offer workshops on outdoor environmental education and general science opportunities and activities for teachers and parents. Many of these groups have also started working with racialized and Indigenous communities to offer workshops that include diverse views and knowledge systems. By working with these groups, we can also address barriers teachers have around teaching Indigenous knowledges in a respectful way that demonstrates understanding and appreciation, not appropriation. It takes all of us working together to move towards changes in the current system.

Program Evaluation

The successful growth and development of any program relies upon an effective evaluation process. Evaluation can a positive impact on the overall direction and growth of ECO educational programs. Collecting data from program users and other partners can be used to demonstrate community need, program successes, areas for improvement, and personal stories and testimonials that demonstrate impact. This feedback is essential to gain perspective on a program and plan for future growth most effectively.

Some information is easy to collect. We can track the number of students, classes, and schools participating in programs, the level of engagement around programs online, the number of trees planted or pounds of fresh food harvested with relative ease. The impact of long-term goals are much harder to quantify, as it is hard to track changes in personal sense of responsibility or level of care for nature.

The concept of 'Brick and Thread' sensibilities is introduced in *Towards Braiding* (Jimmy and Andreotti, 2019). When organizations begin to take steps to authentically 'Indigenize' or 'decolonize', they are often met with this struggle between the western model of systematic goal-oriented indexing (Bricks) and a way of knowing that instead values interconnectedness and relationship-weaving (Threads) and that understands knowledge to be something that can come from many places that would not be deemed reasonable or logical by the western mode.

Tracking ECO education program success by simply collecting data about the number of students participating in camps and school field trip modules is not an adequate measure alone. Our focus is on finding ways to discover the impact on the individuals attending the programs (including teachers, students, parents and other community partners).

This is often best collected by communication, whether in person, written, or over the phone, with participants as well as on-site anecdotal observations by our education team. Feedback surveys following program completion is an important tool in collecting these stories.

With our evaluation, we aim

- To identify key aspects of our approach that are integral to promoting 'Nature Connection'
  - What does Nature Connection mean to us? To individuals?
  - How can we find if this Connection is resulting in continuing positive impact?
- To understand positive change in behaviour and understanding
  - How & under what conditions do our program elements lead to behavioural change?
  - How can we find if our programs have reached participants not just cognitively, but also emotionally (and beyond)?
- To understand the long-term impact of participation in our programs
  - What factors impact teachers/students/campers to return again?
  - How can engaging students contribute to local ecological change?
  - In what ways can our 'Chain of Learning' model cultivate life-long environmental stewards, and how can this chain be strengthened?

Below are some examples of received feedback that highlight the change in behaviour, confidence, and attitude that can be achieved with time in nature:

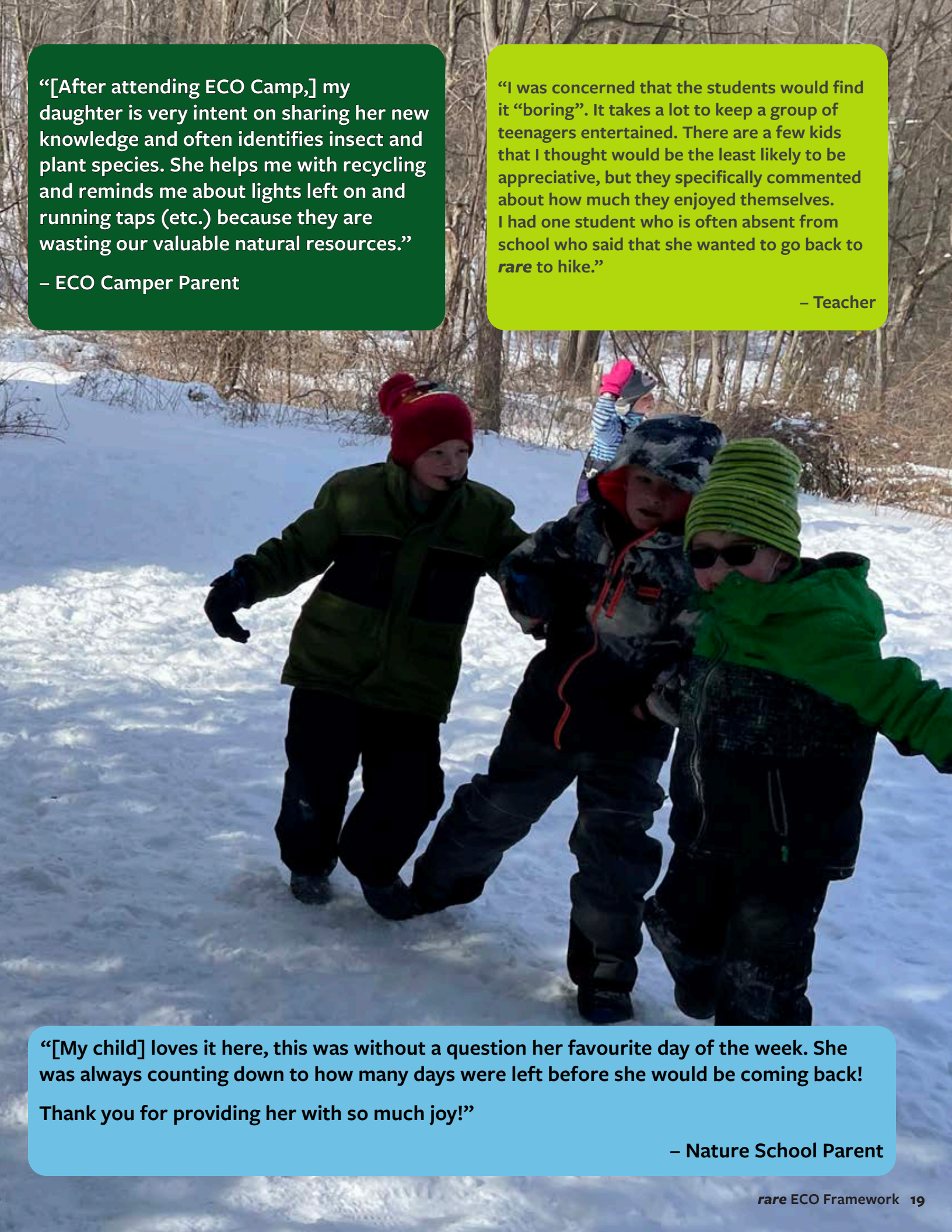
Photos: **(Background)** ECO Campers playing behind the ECO Resource House centre during March Break, 2023. Photo by Michelle MacMillan.

"We are already very eco-conscious at home (recycling, etc.). [After camp,] my son has shown an increased interest in hiking, now that he is confident he can hike somewhat long distances. He continues to love "outside time."

– ECO Camper Parent

"[After attending ECO Camp,] my kids are very aware of their natural surroundings. They can identify with excitement most butterflies they see, birds of prey, insects etc. They have so much to say every day after camp and it is so nice to see their enthusiasm!"

– ECO Camper Parent



"[After attending ECO Camp,] my daughter is very intent on sharing her new knowledge and often identifies insect and plant species. She helps me with recycling and reminds me about lights left on and running taps (etc.) because they are wasting our valuable natural resources."

– ECO Camper Parent

"I was concerned that the students would find it "boring". It takes a lot to keep a group of teenagers entertained. There are a few kids that I thought would be the least likely to be appreciative, but they specifically commented about how much they enjoyed themselves. I had one student who is often absent from school who said that she wanted to go back to ***rare*** to hike."

– Teacher

"[My child] loves it here, this was without a question her favourite day of the week. She was always counting down to how many days were left before she would be coming back!

Thank you for providing her with so much joy!"

– Nature School Parent

Planning forward

Possibilities for Program Revision and Growth

As we look towards the next five, ten and twenty-five years of *Every Child Outdoors*, we recognize that we have several challenges and opportunities to consider in the revision and growth of programs, and specific barriers to participation that need removing. These include expanding the program to new lands and protected areas, where feasible and appropriate, securing low to no cost transportation to sites and/or low to no-cost program participation, expanding diverse community access, increasing the number of repeated visits by students and teachers, and continuing to engage in Truth and Reconciliation learning, unlearning and action that is meaningful to the local Indigenous Nations.

Expanding the Program to Other Lands

To date, education modules have primarily taken place at our Blair site in Cambridge, with some modules and special offerings held at external school facilities (e.g., Mirrored Research, Snowshoeing, Earth Day assemblies) or hosted virtually (e.g., Nature Activity Videos, Virtual Field Trips, Virtual Lessons). As we protect and steward new land in Wellington County through the Eramosa River Conservation Corridor and continue to acquire and protect new satellite lands in Waterloo Region, our 'classroom' will continue to grow, given that some of these sites may be appropriate for additional program delivery (while there also will be sites that are so sensitive or rugged that adding them to formal roster of education sites would not be feasible). We must consider new opportunities and possibilities to feature new locations and habitats within our education programs. Additionally, by expanding *Every Child Outdoors* to new properties, we will be able to increase our reach and serve more regions and community members in Ontario. Growing into new areas presents an important opportunity to engage neighbouring schools and community groups with lands-based hands-on stewardship and learning, for example through stewardship groups. This will strengthen our ability to meet goals like increasing repeated visit programs and connecting local action to global challenges. See our **Program Guide** for an overview of the educational opportunities and limitations at various ***raresites*** locations.

Transportation Accommodations

Securing accessible travel accommodations remains one of the largest barriers for field trip visits from schools, especially when multiple repeated visits are preferred. This becomes increasingly challenging as we engage schools from farther distances to visit ***rare*** properties. Reduction in travel time is one of the primary benefits of program offerings at additional sites. The use of school buses is costly for school boards, and with shrinking budgets, there are often limitations on the number of field trips possible within schools and boards. Through the support of generous donors, ***rare*** has been able to offer a limited number of bus and travel subsidies for classroom visits and ECO Camps and we will continue to work to increase the number of bus and travel subsidies available. We will also increase our promotion of available subsidies to reach new audiences that may not know this support is available, particularly to under-served parts of the community.

Local teachers from schools in closest proximity to ***rare,*** (e.g., Blair Road Public School; Parkway Public School), have tackled this challenge head on by taking public transit or walking with their classes to ***rare.*** Wherever possible, we will support schools that are able to take this low cost and environmentally friendly approach, and have started to work with the local school board to advocate for additional public transit stops.

Finally, we will remove the challenges of transporting students entirely, by offering seasonal modules that take place on the school grounds themselves. ECO Educators will travel to the school when no other transportation options are available and deliver suitable seasonably appropriate education modules with the available natural spaces around the school.

Program fees

Given the constantly rising cost of living, rate of inflation, and an increasing number of sole-support parent families, access to participation in programs that requires a fee is an equity issue. We have worked with local funders, such as the Waterloo Region Community Foundation, to make sure that we can offer subsidized day camp spots that release eligible families from the burden of paying for their children's participation. When we had the opportunity to offer programs at no cost, for example through the Ducks Unlimited sponsored Project Webfoot, we have found that we can reach more people and increase participation. Going forward, we would like to work with sponsors to remove this barrier to participation by offering fully funded programs at no costs to the participants. Pilot programs in other organizations in the Region, for example at THEMUSEUM in Kitchener, demonstrate that this vision is possible and highly beneficial in addressing needs for financial support of families to allow for more equitable access to education opportunities.

Fostering Relationship to Place (Repeated Visits)

Half-day field trips are the most common and accessible field trip type for most classes. They allow ample time for travel to and from schools and are not usually overly disruptive to the remainder of the school day. While these education programs are valuable for building a nature connection for students, repeated visits offer an opportunity to develop a deeper and more meaningful connection to the local environment. This allows students to see and experience the land and wildlife during different seasons and observe environmental change over time. Students returning to visit restoration sites or garden locations where they participate in land-based actions such as tree planting, plant seed starting, or harvesting can see the fruits of their labour. This allows them to see firsthand the positive impact they have had on the landscape and be encouraged by the results of their actions. Research has also shown that ongoing, repeated exposure to civic-engagement skills development and confidence-building participatory activities is needed to foster civic participation in environmental education programs (Wheaton et al. 2018). We will work to increase the number of repeated visit opportunities for field trips to ***rare*** by reducing transportation barriers, expanding curriculum links across subjects, and building relationships with teachers and local school boards.

Nature School is a great example of a program module that supports a repeated visit structure. Small cohorts of students visit ***rare*** for land-based education programs in a safe, engaging alternative to classroom learning. Students participate in fully outdoor programs once weekly over eight weeks, allowing for the opportunity to build skills over time, regularly revisit spaces, and build a relationship with the land and each other. Through hands-on activities and education in a natural space, students build a foundation of knowledge of their local environment and a deep connection to place. Students become increasingly comfortable spending time outdoors and are able to observe seasonal shifts in the land, flora, and wildlife over the passage of time. This program was especially valuable during the global pandemic in providing opportunities for social and physical engagement at a time when opportunities for teamwork, socialization with their peers, and extracurricular activities have been severely limited in a traditional school system. While currently paused as field trips have re-launched, there is an opportunity to explore who Nature School can evolve to address specific post-pandemic education needs and become a sustainable program for parents and students to access on a more on-going basis.

Expanding Community Access and Program Age-Range

The Education department at ***rare*** has primarily been focused on providing programs and resources to students in the K-12 range. However, we recognize the desire for people of all ages to connect with and learn about the local environment. As a result, we have also worked with various post-secondary institutions since 2011 and have held many public education events for the community. Over the last decade, we have provided educational programs to students from the University of Guelph, Conestoga College, Wilfred Laurier University and University of Waterloo. While most of these programs have been for science-related programs, we have also been able to work with students across disciplines, such as architecture students from the Waterloo School of Architecture. Being near several post-secondary institutions, we will continue to build connections and provide opportunities for more post-secondary students and the general community alike for environmental education.

This is just the first step to expand ***rare*** programs to include not just school groups but also families and adults who also have the desire to expand their environmental knowledge and connect with community and nature. This growth into the public sphere goes together with the need to expand access for under-served communities to our education program. This includes racialized, 2SLGBTQ+, new immigrant and other marginalized communities. We will continue to offer subsidies for school programs and ECO Camps to those that need it. We will work to build relationships with other community partners working directly with under-served groups or with community members who have not traditionally had access to our programs. We will adopt a train-the-trainer model that empowers leaders from different community groups with the confidence and knowledge to guide hikes and activities. Community events will remain low to no cost and include regular group learning opportunities.

Settler Responsibility: Continuing to Engage in Truth and Reconciliation Conversations and Actions

As ***rare*** has started the process of learning and unlearning in the context of Truth and Reconciliation, we have identified the need to take a decolonizing approach to our work. This is not a simple undertaking and needs to take complex and painful histories into account. In particular, as a not-for-profit charity, we have emphasized for several years that the Truth and Reconciliation Call to Action No. 92 directly applies to our work, as it calls "upon the corporate sector in Canada to adopt [UNDRIP] as a reconciliation framework and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources." We have and will continue to implement this call, providing training to staff and volunteers on the histories of Indigenous peoples in Canada, including residential schools, treaty rights and responsibilities, and other related matters. We see this as only a small step on the path of meaningful reconciliation. There are also several

calls specifically for educational institutions. These include respecting and honouring treaty relationships, developing culturally appropriate curricula, and enabling parents to fully participate in the education of their children. We have much to learn to come to a better understanding of intergenerational trauma and our responsibilities as settlers on these lands, particularly our responsibilities to the Indigenous Nations on whose territories ***rare*** is located: the Onkwehon:we Peoples of Six Nations of the Grand River and the Anishinaabe Peoples of the Mississaugas of the Credit. It will be critical to create opportunities for individuals from these nations to lead program development and implementation as it relates to Indigenous ways of knowing and being. This could be accomplished through creating future employment opportunities, and also by ethically engaging with Indigenous Nations and organizations to run their programs on ***rare*** lands.

The education department has begun to examine how and to what extent our current content and pedagogy reflect the histories and presence of the local Nations, and the valid contributions of Indigenous knowledges. We will continue to revise our programs to better reflect a braided approach and continue to consult with experts from various organizations, institutions and backgrounds. Our initial approach to Indigenous engagement was not appropriate to address the multiple and changing complexities of settler-Indigenous relations. We have identified what has been generative about our work, but most importantly, we also have made space in the past year to reflect on our mistakes and failures, and how they have contributed to further systemic harm, and have summarized those learnings and those of others in a research and failure report. We commit to providing the additional time, space, and capacity for the organization to learn and unlearn from past experiences. We continue to seek to learn from the experiences of different organizations that are also working to re-imagine conservation, and the related environmental education in the out-of-doors, and their approaches to Indigenous engagement. We identified the following areas of importance in this work:

1. Acknowledging colonial history of what is now known as Canada and its past and ongoing systemic harm with a focus on settler responsibility. This includes gaining a better understanding of treaty responsibilities.
2. Building relationships and involving the local Indigenous Nations in this work. It also means understanding pacing and communicating that ethical relationship building in this direction can take decades and will require much unlearning on our part.
3. Emphasizing living sustainably through reciprocal relationships, with each other, but also reconnecting people, land, and all relations.
4. Continuing to fairly compensate Indigenous educators and leaders as co-creators for ECO Program growth and revision and for delivering programs.
5. Enabling land access free of charge for Indigenous-led education outside of ***rare's*** offerings and supporting such third-party programs through funding opportunities.
6. Fostering global responsibility by demonstrating that to this day, dispossession of Indigenous land and the resulting destitution continues in the global south, and how our actions locally are linked to the larger metabolism of a sick planet (Andreotti 2021).

To meet the Calls to Actions and working towards a braiding of knowledge systems, there are several things we need to work on. These include engaging Indigenous collaborators to create age-appropriate curriculum on residential schools, treaties, Indigenous peoples' contributions to what is now known as Canada (and the difficult truth that white settler privilege was built on the stolen land and broken backs of Indigenous peoples) (Ahenakew reference), and other settler responsibilities and complicities; identifying teacher training needs in relation to settler responsibility education; building student capacity for inter-cultural understanding, empathy, and mutual respect, humility and surrendering arrogance (Andreotti 2021); sharing information and best practices on teaching curriculum related to the above; and securing funding to hire Indigenous Knowledge Keepers and Elders to support these programs as well as deliver Indigenous-led programs. Recognizing that students can learn in many different ways and having a goal of providing multi-disciplinary environmental education programs, we will support different knowledge systems, subjects and tools through our environmental education pedagogy. These will include Indigenous ways of knowing and being, oral storytelling, and western knowledge systems such as the scientific method, the arts, mathematics and music, and also tie into our work as an international research institute by making new connections and partnership.

For example, a Mitacs Accelerate fellowship in partnership with Educators Sharon Stein and Rene Suza at the University of British Columbia will support Shyrlene de Oliveira, a postdoctoral fellow from the Amazon in Brazil, to map different understandings and approaches to land conservation from both mainstream (western) and Indigenous perspectives. Based on these cartographies, the project will create a strategic paper for an international Indigenous-led agenda for decolonization of land conservation practices, as well as an educational toolkit that will translate the research findings and strategic recommendations into pedagogical tools and frameworks that will be used to engage conservation organization staff, funders and supporters, local communities and others in deeper, more nuanced conversations about settler and Indigenous perspectives on land conservation practices in both countries.

Making Connections

Ethical Engagement with Partners

As we move towards building respectful relationships with equity deserving communities (BIPOC, newcomers to Canada, 2SLGBTQ+ community and other marginalized groups), we will hold closely our guiding principles while we continue to learn and unlearn how to not only make space, but at times give up space for others to take the lead – for example, partnering with organizations and individuals and supporting them in their work and realizing their vision.

Photo: Making clay moccasins at ECO Summer Camp. Photo by Michelle MacMillan.

Some of the things we learned are that when working with a new partner for the first time, learn and practice appropriate pronunciation of unfamiliar names and words. Ask new partners in advance how they would like to be addressed and what pronouns they use. Be mindful of cultural responsibilities or requirements such as holidays, fasting, religious or traditional ceremonies and practices that may take place at certain specific times of the day, week or year. Be transparent about available budget or budgetary restrictions and fairly compensate time and expertise provided. Compensation should consider travelling costs and whether they will require assistance with transportation. Be respectful of people's time and schedules by giving advance notice and engaging partners at project conception as much as possible. Base relationships in reciprocity, always offering support and/or renumeration and working together toward shared goals and asking for permission and consent about what can and cannot be shared. Since BIPOC individuals are underrepresented in the environmental sector, be deliberate in efforts to provide diverse role models through volunteers, special guests, and hired educators as well as ensuring resources, books, and activities demonstrate inclusivity and equity.

When inviting Indigenous partners to our camps, programs, or events, we should remember that a phone call is better than a letter or email. Indigenous Knowledge Keepers should be contacted multiple times in advance before an event or speaking engagement, as appropriate and with permission. Offering tobacco is a respectful way to ask for assistance from an Indigenous Knowledge Keeper or Elder. It is often presented in the form of a tobacco tie when asking for knowledge, song, or ceremony to be shared.

A smudging opportunity should be available at events, programs and in spaces. Indigenous facilitators should be supported in being able to smudge at the beginning of an event or program or meeting.

We should learn to understand, recognize and support ownership over shared traditional and cultural knowledge. We should be open and transparent about how any knowledge that is shared with us will be used within education programs. Asking for permission and recognizing where we received the knowledge that is being presented in an education program is one way we can avoid appropriating traditional or cultural knowledge. We should always be careful that we have explicit permission and consent to share knowledge and stories with others before doing so. As a settler-led organization, not all knowledge is ours to share.

Connecting With Local School Board and Teacher Priorities

Given our location in Waterloo Region and Wellington County, we primarily book programs with the Waterloo Region District School Board, Waterloo Catholic

District School Board, Upper Grand District School Board, and the Wellington Catholic District School Board. However, bookings are welcomed from other school boards, especially those located within 60km of ***rare*** properties including the Conseil Scolaire Viamonde, Conseil Scolaire Catholique MonAvenir, Halton District School Board, Halton Catholic District School Board, Grand Erie District School Board, Thames Valley District School Board, and the London District Catholic School Board. Bookings are also welcomed from homeschools, private schools, and other alternative learning centers. There are three key areas where ***rare*** programs connect with local school board priorities: Sustainability, Equity, and Indigenous Education. Although these areas are specifically outlined in school board policies, they are all areas that independent schools as well as homeschools can connect with and benefit from.

Sustainability

With the urgent need to act on climate change mitigation and adaption, schools all over Ontario have set sustainability goals as a strategic priority. There are many opportunities for ***rare*** to be a valuable partner to the school board on these goals.

EcoSchools Canada offers a certification program for K-12 schools that focus on environmental education and climate change action. Every year, schools apply for certification by earning points through environmental actions, campaigns, and projects. Depending on the number of points earned, the school will be awarded a certification level ranging from bronze to platinum. There are several opportunities for ***rare*** to assist schools in earning points for different certification levels such as our environmental education modules, school ground greening resources and assistance, and environmental stewardship campaigns like "Turn the Map Green".

As of 2020, all the schools in the Waterloo Catholic District School Board and Upper Grand District School Board are certified EcoSchools. Only 46 of the 121 schools in the Waterloo Region District School Board are certified. This presents some great opportunities to help local school boards certify more schools and re-certify existing EcoSchools year after year. Additional opportunities may include creating workshops for schools on waste reduction, native pollinator gardens, waste and energy auditing, and energy conservation to help with achieving points for EcoSchools. The strategic priorities or school board values all mention a commitment to environmental education, sustainability or specifically the EcoSchools program.

Equity

Many school boards across the province share sentiments of respecting diversity, celebrating multiculturalism and honouring individual and human rights. For example, the WCDSB aims to increase the "use of culturally relevant and responsive pedagogy", and the Thames Valley DSB seeks to "provide an equitable and inclusive environment that champions learning opportunities for all".

Dr. Sarah Eaton's *21 Characteristics of 21st Century Learners*, imparts that "modern learners have multicultural awareness and appreciation", perhaps more than any other generation before them. They are also "increasingly aware of the world around them" and ask questions and demand answers on everything from the environment to politics. Our goals to increase diverse perspectives and take a multi-disciplinary approach to environmental education matches with these priorities and thus provides us with an opportunity to work with school boards to achieve them. Environmental education is also a key avenue to reach out to learners of all types, especially those that may face difficulties in an indoor classroom environment. Testimonials from ECO Program teachers from the U-Turn Alternative Education program in Waterloo report that students who participated in ***rare*** programs were much more engaged and naturally curious than when in the classroom. Continuing to work with U-Turn and other alternative education programs will help us connect to this priority of the various school boards we serve.

Indigenous Education

Indigenous education is another key area where we can help school boards fulfill their strategic priorities. Many teachers are interested in adding Indigenous knowledge and ways of knowing and being into their curriculum but are unsure how to go about doing it in a respectful manner that is culturally sensitive. This opens many opportunities for ***rare*** to connect teachers to tools, resources, and Indigenous Knowledge Keepers that may help them on their journey. Our approach must recognize our position as a settler-led organization and focus on teaching about the importance of reciprocal human-nature reconnection with emphasis on treaty and settler responsibilities. We must be careful to not compete with Indigenous-led groups for funding and exposure, but rather work in partnership toward common goals.

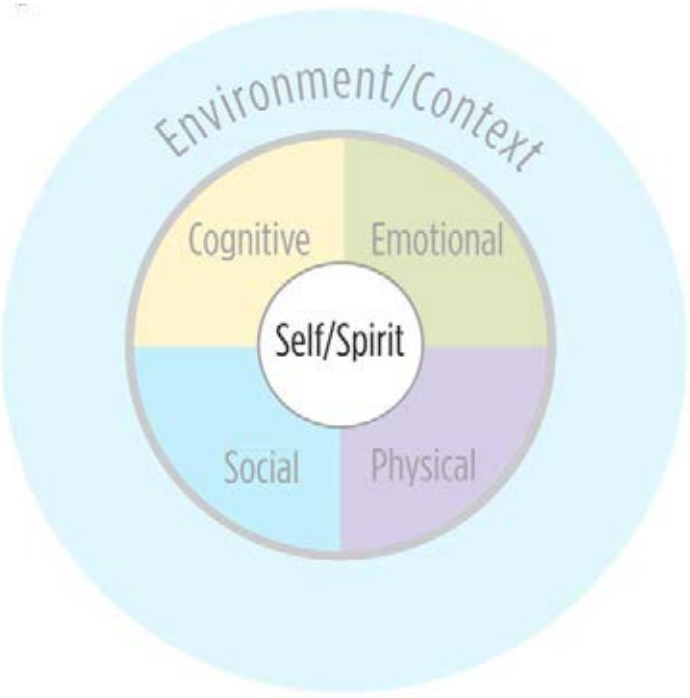
Connecting With the Ontario Curriculum

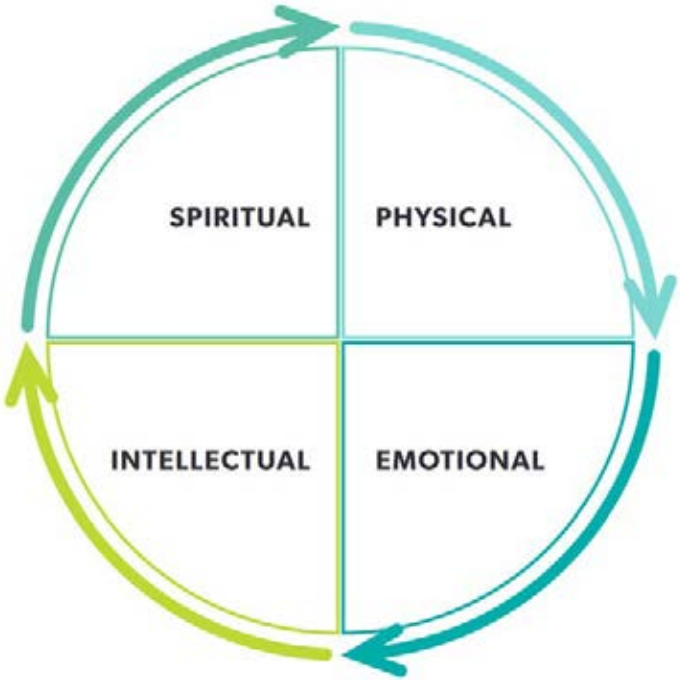
ECO programs take a multi-disciplinary approach to environmental education making curriculum connections with many different school subjects, including science, arts, health and physical education, mathematics and more. We have always been open to designing custom curriculum connections with teachers to meet their needs. The following table describes some connections to fundamental concepts found within various subject curriculums.

Science	Art	Mathematics	Health & Physical Education
• Change and continuity • Systems interactions • Matter • Energy • Sustainability and stewardship	• Understanding culture • Developing creativity • Communication • Making connections	• Data management and probability • Reasoning and proving • Communicating • Number sense and numeration • Measurement • Representing • Reflecting • Problem solving • Geometry and spatial sense • Connecting	• Balanced, integrated and connected to real life learning • Physical activity as a key vehicle for student learning • Physical / emotional safety precondition for effective learning • Student centered • Skill-based learning

Stepping Stones is a resource document created by the Ontario government to support the development and delivery of high quality youth education services across the province (Ontario,nd). It describes a framework for youth development that includes their cognitive, emotional, social, physical and spiritual/self development, all interrelated and interdependent, and subject to the context and environment of that individual. This framework has similarities with Indigenous pedagogy on quality learning environments, relevant competencies and skills and the medicine wheel. "The medicine wheel has a direct relationship to quality learning environments that extend beyond literacy, numeracy and standardized curriculum. It is based in holistic learning environments that are inclusive of the preceding, but also value the physical (health), the emotional (social-emotional), the intellectual (citizenship) and the spiritual (creativity)." (Toulouse, 2016).

Images: **(Left)**: A photo from Me as a Tree, a Stepping Stones Expressive Arts Event. The photographer is unknown; **(Below Left)**: Image taken from ***Stepping Stones: A Resource on Youth Development*** [Ontario, nd]; **(Below Right)**: Image taken from ***What Matters in Indigenous Education: Implementing a Vision Committed to Holism, Diversity, and Engagement***.





Relevant connections are also present in the Citizenship Education Framework described in the Canadian and World Studies curriculum. This framework consists of four main elements: active participation, identity, attributes, and structures, with knowledge, skills and attitudes associated with each element, and various terms and topics that are related to citizenship education on the inside. Many of the skills, attitudes and topics mentioned in this framework are mirrored in ***rare's*** guiding principles, proven successes, and areas for growth and reflection such as stewardship, equity, inclusivity, interconnectedness, systems, community, self-efficacy, conflict resolution and peace building, advocacy, leadership, and volunteering.

The Citizenship Education Framework

Source: Canadian and World Studies Curriculum, 2015, pg. 13

The Specialist High Skills Major programs at our local school boards is another area of connection between ECO Programs and the Ontario curriculum. SHSM programs provide grade 11 and 12 students the opportunity to specialize, gain qualifications in and plan for a career pathway in a specific employment sector while still in secondary school. SHSM programs include three main components: Certifications, Courses and Co-op, and can include a Sector Partnered Experience. Students who successfully complete all requirements can receive a SHSM designation (Red Seal) on their Ontario high school diploma. Almost all the school boards near ***rare*** offer some sort of Environmental or Energy SHSM program (WRDSB, WCDSB, UGDSB, HCDSB, HDSB, GEDSB, Wellington CDSB, Peel DSB, Dufferin-Peel CDSB, Hamilton-Wentworth CDSB, TVDSB, LDSB). Others also offer non-profit SHSM programs (WRDSB, UGDSB, Wellington CDSB, Dufferin-Peel CDSB, Peel DSB, HWCDSB, LDCSB) among other programs. The Environmental Magnet Program offered at Southwood Secondary School is an example of a SHSM program.

In the past, students from Southwood's SHSM program have helped with creek restoration projects at ***rare.*** Projects like these can serve as Sector Partnered Experiences for various other SHSM programs. Other possible projects can include invasive species removal, restoration of different habitats on the ***rare*** lands, tree planting, data collection for the research department, assistance at the gardens and more.

Photos: Artwork produced during the Me as a Tree Stepping Stones event in April 2022. The photographer is unknown.

Conclusion: Re-connecting With the Land

At ***rare***, we believe connecting with the land means so much more than just spending time outdoors. Connecting involves continual relationship and participation with the land. It involves conscious interaction with the land, and the embodied understanding that we are not separate from the environment, but a piece within it.

As educators, connecting with the land means continually learning from and with the land in all seasons, seeing how things change or remain constant from year to year. It means educating ourselves about the history of the land, both past and present, so that we can help others to understand these stories and our current place within them.

By keeping this connection in mind and heart while revising and growing our ECO education programs, we center teachings of reciprocity into our programs. At ECO Camp, campers have their hands in the soil, tending and harvesting plants in our Food Bank Gardens. At Nature School, students planted trees annually at a field rehabilitation site, helping regrow a forest where one previously stood 100s of years ago. These actions help to not only empower learners to become active participants in the environmental movement, but also stand as physical markers of each participants' connection with the land at ***rare.*** Learners can come back in the seasons and years to come and see where their touch has left a positive impact on the landscape.

Getting students to connect deeply with the land requires us to go beyond just the mental connections of learning about the environment, and to facilitate physical, emotional and even spiritual connection to place. This type of work is something that is not done lightly or without proper care, and as educators we must work to foster these connections within ourselves as well. This involves spending time with the land and continuing the work of learning from other departments, community partners, experienced outdoor educators as well as teachers and knowledge keepers within the local Indigenous community. These relationships are integral to maintaining a strong and vibrant environmental education program.

As we continue to develop the program, we will work to find new and exciting ways for those experiencing our programs to develop their own connection with the land, such as by collecting seeds of native, pollinator-friendly plants and growing them in their own gardens at home or school. Activities in our programs tap into different ways of knowing, such as science, art, storytelling and exploration.

Positive feedback and returning campers and classes year after year tell us we are on the right track, and the roots of learning are beginning to take hold.

Photo: ECO Campers explore the banks of the Grand River in the summer of 2023. Photo by Michelle MacMillan

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Photos: **(Below)** Gill Ratcliffe Gardens & Facilities Coordinator Taryn Jarvis [right] leads ECO Campers on a tour of Springbank Farm; **(Back Cover)** ECO Campers return to the Slit Barn and ***rare's*** ECO Centre. These photos were taken by Michelle MacMillan.

Appendix: *raresites* Educational Opportunities Plan

Property Name	Property Location	Priority School Board(s)	Relevant Management Plan Details	Barriers, Limitations, & Challenges	Opportunities
Reiner *(43.94 acres)*	Region of Waterloo, Township of North Dumfries and City of Kitchener	N/A	-no public access -within Roseville Swamp ESPA -mostly forested swamp with difficult terrain -no permanent structures -full property designated Very High Protection (VHP)	-difficult terrain and access make it largely unsuitable for school groups, especially younger kids -VHP status extremely limits education opportunities -limited parking/no bus possible	-localized restoration activities or invasive species management could present opportunities for youth/community engagement on case-by-case basis
Coolcullen *(6.2 acres)*	Region of Waterloo, City of Cambridge *@ Cedar St and Kent St.*	WRDSB-*Southwood High School, in particular, is across the street*	-part of Gilholm Marsh, ESPA 58 & PSW -includes part of a kettle wetland and mature forest -one established path around the forest used by local residents linked to Sim Court Park -some neighbouring encroachment issues -Mostly designated High Protection (HP) but edge area with trail Low and one corner VHP	-the small size and limited trail mean it is largely not suitable for formal field trips and ECO programs -limited parking/no bus possible	-opportunity for "at school" programs at Southwood that visit this location, but the interior HP section is difficult terrain and shouldn't be exposed to too much activity -Chris Giesler has expressed interest in having his students conduct monitoring or other regular visits; could follow Eramosa model with a visit once/month -possibility for ECO Camp outing to this location?
Property 1 *(83.5 acres)*	Wellington County, Township of Guelph-Eramosa *@ 5174 7th Line*	N/A-*University of Guelph possible*	-no public access -includes driveway surrounded by naturalized meadow vegetation, and two forest areas with an agricultural field between -second forest is treed slope and bottomland associated with the Eramosa River -majority of property designated VHP	-distance from schools presents a challenge -no structures/facilities on site -rugged trail makes accessibility difficult, especially by young groups	-May be best suited as a field course location for University of Guelph -occasional community events, especially in partnership with Nature Guelph, would be possible -localized restoration activities or invasive species management could present opportunities for youth/community engagement on case-by-case basis
Property 2 *(58 acres)*	Wellington County, Township of Guelph-Eramosa *@ Wellington Rd 29 & Barden St*	Guelph Boards/Private Schools	-forested riparian wetland of the Eramosa River, with floodplain, valley slopes, and limestone outcrops -single trail runs the length of the property with some local access -designed High and Very High Priority for protection; trail is in HP section	-water edge safety considerations -storage shed on site/ no facilities -no loop; hike in/hike out	-consider if this is appropriate site for a water/benthics MR with a hike in and then sampling at the water's edge. Could be an alternative location for Guelph school boards? -set up long term snake monitoring here and create MR program at this location on that topic?
Edgewood *(37.9 acres)*	Wellington County, Township of Guelph-Eramosa (Village of Eden Mills) @X	Guelph Boards/Private Schools	-former site of Camp Edgewood -primarily forested valley land surrounding Blue Springs Creek -man-made pond in the centre of the property used to be used for swimming and boating -main trail loop with three footbridges and secondary trails commonly used by locals -designed High and Very High Priority for protection	-possible bus drop off at nearby park, short 5 min walk to trailhead from there -storage shed on site, no other facilities	-consider what field trip programs could be run here. Aim to offer at least one program per season at this location for schools as an alternative site -consider if this could be a site for ECO Camp field trip, particularly Teens week

Overall Considerations:

-increase mileage budget in Education Dept. to include potential for field trips at new locations

-equipment cleaning protocol if D-nets and other items are being used in both the Grand and Eramosa Rivers