Stepping into Nature

BACK TO Nature NETWORK

Teacher Stories,
Volume 1

BACK TO Nature NETWORK

Who are we?

The Back to Nature Network is a multisectoral coalition of organizations and agencies working to connect children and families with nature. The Network has been established with the support of the Ontario Trillium Foundation through a collaborative partnership between Royal Botanical Gardens, Parks and Recreation Ontario and Ontario Nature.

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Positioning Statement

A Province of Ontario Network – Back to Nature

A connection to the natural world is fundamental to all aspects of child development and is a key component to building optimal mental, emotional, social and physical health for every child. This critical link also represents a key building block for the future of a sustainable society.

Research shows that when we foster a child's connection with nature, the child flourishes: child obesity decreases, bullying rates decrease, child injury rates decrease, while academic achievement rises, physical activity rates increase, attention spans improve, physical and cultural barriers melt away and environmental stewards of the future emerge.

More work needs to be done by our governments, our educational institutions, our communities, our families and individuals to develop and support the natural spaces and initiatives necessary for our children to thrive and the research to guide us as we make these important changes. Connecting our children to nature needs to be a provincial and national priority.

Over 80 organizations have endorsed the Back to Nature Network and its Positioning Statement; to view the logos of all current Members please visit our website at www.back2nature.ca/network-members.

This publication can be downloaded at www.back2nature.ca.

Edited by Grant Linney
Layout by Grant Linney and Mark Whitcombe

Supporting Organizations

This publication has been produced with the endorsement of the following organizations:

coeo
The Council of Outdoor Educators of Ontario
www.coeo.org

Green Teacher
Green Teacher Magazine
greenteacher.com

O.S.E.E.
Ontario Society for Environmental Education
home.osee.ca

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Preface

It was almost five months ago that I issued a call for teacher stories about taking elementary students outdoors, within walking distance of one's school, and with an environmental theme. While I had high hopes at the time, I had little idea that we would achieve such impressive results:

- 16 passionate voices (11 public school teachers, two independent school teachers, one principal, one superintendent and one parent) from across much of this province and all firmly rooted in their own personal experiences of the outdoors
- Articles embracing urban and rural voices as well as new Canadians
- The full range of K through Grade 8
- An impressive range of topics including aquatics, bird banding, citizen science, community celebrations, entomology, gardens, invasive species and map reading. The take-away message here is to discover what 'hidden' natural and human resources are available within one's own community and then to make extensive use of them.
- Constant, rich, extended and varied links to curriculum made all the stronger through hands-on outdoor learning.

It was easy to decide which article would open and which one would close this collection. Audrey Armstrong begins her piece with an iconic quote from Rachel Carson on the power and necessity of wonder. Suzanne Hamel ends her submission with these same keystone words. To which I will add a few more thoughts from the same scientist and writer:

> *I sincerely believe that for the child, and for the parent seeking to guide him, it is not half so important to know as to feel. If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil. Once the emotions have been aroused — a sense of the beautiful, the excitement of the new and the unknown, a feeling of sympathy, pity, admiration or love — then we wish for knowledge about the subject of our emotional response. Once found, it has lasting meaning. It is more important to pave the way for the child to want to know than to put him on a diet of facts he is not ready to assimilate.*
>
> *Rachel Carson,* The Sense of Wonder, *1965*

We are lost souls without this emotional connection, and it can only come about through repeated and positive hands-on outdoor experiences. Here's hoping that this marvelous collection of stories will motivate you to take the children in your life into this imperiled one-of-a-kind place of wonder and engagement. If we come to know it better (a *knowledge of the heart*, to quote author and outdoor educator James Raffan), perhaps we will protect it better.

Acknowledgements:

My thanks begin with the 16 authors who took the time to share their wonderful stories in this publication. Your creativity and dedication are inspiring.

I had little idea how much time it would take for the editing and layout of 15 articles, 27,500 words, and 60 photos. I

am grateful for the encouragement and proofing skills of Bill Kilburn of the Back to Nature Network. I am also indebted to longtime friend and colleague Mark Whitcombe for his multi-level support in terms of sage advice, editing and layout.

Finally, I wish to thank four organizations who endorsed this undertaking:

- The Back to Nature Network (whose website is hosting this electronic publication)
- The Council of Outdoor Educators of Ontario (COEO)
- Green Teacher Magazine
- The Ontario Society for Environmental Education (OSEE)

Grant Linney

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June 1, 2013.

Grant Linney is a recently-retired career outdoor and environmental educator who remains active in the field through personal pursuits, presentations, writing and teaching. He is a former president of COEO (The Council of Outdoor Educators of Ontario) and a lifetime member of the International Save the Pun Foundation.

Enviroart floating on water created by a Grade 8 student

Is that your final antler?

Wiarton Monarchs

A primary program takes flight.

By Audrey Armstrong

If I had influence with the good fairy who is supposed to preside over the christening of all children I should ask that her gift to each child in the world be a sense of wonder so indestructible that it would last through life, as an unfailing antidote against the boredom and disenchantments of later years, the sterile preoccupation with things artificial, the alienation from the sources of our strength.

(Rachel Carson, The Sense of Wonder, 1965)

Students view tagged butterfly. Photo copyright Willy Waterton

When I was a child, my mother had us help her make signs proclaiming, "DO NOT SPRAY" to post along our country roads. She was an avid student of Rachel Carson and very concerned with the widespread use of herbicides and pesticides in rural Ontario. She showed us the wonders of ants, bringing food to their hills. We also marvelled at the vivid colours of the Scarlet Tanagers, Indigo Buntings and Baltimore Orioles in our backyard. Her love of nature and philosophy to preserve the natural environment became mine.

When I first started teaching (for the Bruce County Board of Education, later Bluewater), I took my Kindergarten class outdoors to explore the "Emerald Forest," a pine plantation behind Hepworth Central School. Every Labour Day weekend, I would bike the local roads looking for monarch caterpillars to bring to school. We would watch with wonder as the

emerald green chrysalis changed to black, and then vivid orange and black butterflies emerged and spread their wings. Then, I packed away my monarch materials and moved on. We would have winter picnics in the snow and use the outdoors as inspiration for art, science and creative writing opportunities.

In August 2004, I took a course called Teaching and Learning with Monarch Butterflies offered by the Monarch Teacher Network at McMaster University in Hamilton. Having taught the life cycle of the monarch to my kindergarten students regularly, I thought the course would be a review of some science concepts I could incorporate into my teaching in the future. Instead, I had a life-changing experience by meeting and becoming friends with Erik Mollenhauer, a passionate educator and Program Director at ERIC, the Educational Information and Resource Centre in New Jersey, USA. His teaching team covered so much more than the basic science of rearing monarchs in the classroom. I learned more about monarch migration, and butterfly gardening. I joined the Journey North and Symbolic Migration programs connecting with pen pals in both Canada and the U.S. I learned how to feed butterflies (in the event that inclement weather delays their release) and how to become citizen scientists and tag them (part of Monarch Watch out of the University of Kansas).

Back at Wiarton Public School, I involved my Kindergarten students in monarch caterpillar collection, growing milkweed to sustain our hungry caterpillars and eventually in creating a Monarch waystation (butterfly garden) to provide both host plants and nectar flowers for migrating and resident butterflies. My primary students at my current school Peninsula Shores District School (also in Wiarton) are always the stewards of the butterfly garden and as such, we are outdoors on a regular basis working on projects such as planting, spreading mulch and collecting seeds. My class is involved in organizing and participating in Earth Day activities and they also collect compost from several classes to generate more good planting soil for our garden.

I like to release monarchs and plant flowers in the garden, because when we go outside with my teacher, it makes me feel good. (Lara, Grade 2)

We follow the Monarch Watch web site to see if any of our tagged monarchs have been found in Mexico. Now, instead of packing away my monarch unit, I teach using the monarch butterfly as a big idea all year long.

In October 2009, I attended another course, "Voices from the Land," also offered by the Monarch Teacher Network. This is a program intended to immerse children in creating visual art, literacy and drama based on interactions with nature. We create ephemeral art in the outdoors, photograph it and dismantle it. It is a fantastic way to collaborate with another teacher and partner students with others, sharing ideas and experiences. When my colleague, Deb Lembke and I work with our two primary classes, we are astonished by the results of the children's observations. Poetry, both simple and complex, and drama presentations with visual references to the natural world are shared with other students and staff. Now, we regularly take our classes outside to respond to "Voices from the Land." The following poem was written by five Grade One children this past winter.

Bird's Nest

Round snow eggs in a nest
Hiding in the twig forest
Snowy fields and children working together
A pretend pond with lots of water, frogs and minnows
We want to look at it all day long.
By Lacey, Tehya, Zoe, Travis and Grace

Working with a committee of amazing colleagues, we hosted two Monarch Teacher Network workshops at Peninsula Shores District School in 2008 and 2009, training 100 teachers from Bluewater and other boards in Ontario, as well as naturalists from provincial and national parks to incorporate the monarch story into their teaching. In 2011, we offered a third workshop in our district at Sulphur Springs Conservation Area near Hanover. As well, in 2012 we hosted a "Voices from the Land" workshop at G.C. Huston School in Southampton, training 30 teachers from Bluewater District School Board, national park staff and naturalists in the joys of creating art outdoors.

Teacher workshop by Monarch Waystation, Peninsula Shores District School. Copyright Willy Waterton.

In 2013, I travelled to California with the Monarch Teacher Network to visit the overwintering sites of the monarchs. The trip included many other migrants such as grey whales, elephant seals, dolphins and birds. I travelled with a small stuffed toy Wiarton Willie, (my version of the Travelocity gnome or Flat Stanley), and created a slide show that my class is narrating. Since my return, they have been researching sea otters, redwoods, banana slugs, elephant seals and grey whales to share the story of my experiences with other classes.

Over the years, the positive experiences I have had working with colleagues, children and administrators confirms for me the value of enduring lessons incorporating nature into all aspects of the curriculum and school life. Often, I meet a high school student (and a former student of mine) in the halls of our JK-12 school and the first question I always get is, "How are the monarchs this year, Ms. Armstrong?" If children can remember a caterpillars and their magical metamorphosis, they will want to preserve the environment so that their own children can have the same awe-inspiring experience.

In the end, we will conserve only what we love,
We will love only what we understand,
We will understand only what we are taught.
Baba Dioum, Senegalese Conservationist

Check the Monarch Teacher Network website to learn about workshops being offered this summer.

Audrey Armstrong teaches Grade 1/2 at Peninsula Shores District School in Wiarton, Ontario for the Bluewater Board of Education. With impending retirement, she looks forward to paddling, hiking and exploring more of the Bruce Peninsula as well as travelling the planet with her husband Willy Waterton. She will continue her work with the Monarch Teacher Network.

Author with students

Outside Every Day

Outdoor Learning at an Inner City School

By Hilary Cook-Thompson

I am a lover of nature and have been exposed to many aspects of outdoor learning throughout my life. I have no formal training in outdoor education and I am by no means an expert. My motivation to teach in the outdoors has created an alternative world of learning outside the walls of the regular classroom.

My love of nature comes from many areas of my life growing up. As a Girl Guide, I hiked through urban forests and meadows and along Lake Ontario beaches. Here, I studied flower and tree species, enjoyed bird watching, cast paw prints in the sand, and cooked on outdoor fires. As a young girl, my family went camping to Ontario Provincial Parks and, eventually, my father built a cottage, where I was able to explore in the woods to my heart's content. My husband also is a fine lover of nature and we travel each summer to stay at a secluded cabin on 20 acres that has no conventional running water, electricity or indoor plumbing. Here, I am able to get back to basics and truly become one with nature by witnessing so many species in their natural habitat.

As a teacher, I want my students to experience the joy that nature can provide. I want to teach them the delicate balance of life and how much knowledge and fun a person can gain from learning in the outdoors.

Teaching outdoors is so easy. I just started taking my students outside for every subject. Every morning, we do our Daily Physical Activity outdoors, even in the winter. I bring the CD player and play various catchy tunes to exercise and stretch with. I often get many parents working out with us as well. I read stories, tell oral stories and sing songs in many locations in the schoolyard and in the local park. My students love singing the song "Listen to the Water" by the edge of the local babbling creek. We are also looking for the Three Bears and Goldie Locks when hiking in the local woods. All one really needs is imagination and enthusiasm and the learning just takes off.

Take a hike

We practice math in the community by looking for shapes, patterns, and numbers. I love teaching science concepts outside as it offers such an array of natural material when teaching the change of the seasons, measuring rainfall for graphing, looking at shapes of snowflakes with magnifying glasses on frozen black

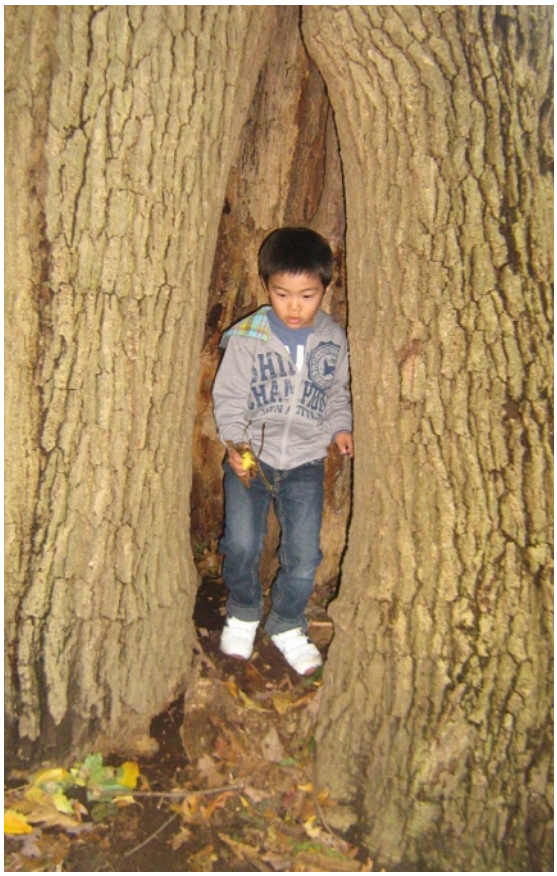
construction paper, or investigating sink and float with coloured ice balls and watching them melt to make new colours. The students explore sand in forms of dry, wet and frozen in the playground and build structures with sticks, leaves and snow.

We are very lucky to be located within walking distance of Taylor Creek Park where I am able to take my students to bird watch, explore many species of plants and observe the change of the seasons.

I get most of my ideas from other teachers on the Internet and from reading literature on outdoor education. I am currently starting a weekly pond study to observe and record aspects of pond change throughout the spring. I have never done this before, but with the enthusiasm of the teacher-librarian, we decided to use field guides to identify various species. I make sure all my students have appropriate clothing, a backpack, clipboard, and a pencil. I record every outing with my camera.

Many of my parents and their children are newcomers to Canada and they are timid to explore beyond the school. I regularly invite my parents to join us on each outing to expose them to what is available in their local community. This, in turn, will hopefully get them interested to make use of their local park on a regular basis. I love when a parent and child come to me to tell me what they have discovered on their own.

Some of the challenges of implementing outdoor learning at an inner city model school are getting students physically fit and used to walking longer distances to go to the park. Most students at my school live in apartments and do not go out to play very often. It takes effort to go out in all types of weather. I do a lot of advocating by discussing with parents that



Tree-mendous Opening

playing outdoors and getting dirty is okay. From my experience, many parents who are newcomers to Canada think school is based on rote learning and are not aware of learning through inquiry-based play, especially outdoors. I regularly display and discuss what we are learning in my weekly newsletter to help them better understand the learning. Many do not want to send their children out in the cold. I show parents how to dress in layers. I also go to Value Village and buy extra scarves and mitts and even use unclaimed outdoor gear from the Lost and Found to give to the students.

My Principal and Vice-Principal are very supportive of teaching the curriculum outdoors. They understand the learning and creativity used to teach various concepts in the outdoors. My Vice-

Principal legitimizes the learning by tweeting pictures to her colleagues. I send pictures to my cohorts in the school to hopefully encourage other teachers to take the learning outdoors.

Dressed for the occasion

I feel that outdoor learning exposes students to nature, helps them discover life beyond the classroom, increases their oxygen and heart rate, and expands their knowledge base. My students love going outside, and are better ready to learn both inside and outside, as they are enthusiastic about what adventure I will take them on next.

Here are some easy ideas for outdoor learning in Kindergarten.

Math: Look for shapes in nature. Look for types of lines such as horizontal, vertical, and diagonal in trees, bushes and rocks. Build structures out of sand, snow, sticks, and leaves.

Science: Investigate and ask questions to develop critical thinking skills:

- "Why do you think animals put nests in trees?"
- "Why does the duck have a green head?"
- "How do you think this burr sticks to clothing?"
- Look for answers with students on search engines on the Internet; use field guides books and other books on nature.

Art: Sketch line and shape in nature. Sketch and write about items found in nature such as beehives, sticks, and bean pods. Study Emily Carr and then try to paint evergreen trees.

Literacy: Read the story of Goldilocks and the Three Little Bears, then act it out in open theatre in the forest; write about our findings when we get back. Explore a hollow tree, using prediction skills, higher order thinking skills, as to how this happened. Use the tree to do drama. Read stories in the forest.

Oral Language**:** Here are some poems and songs we tell on our hikes: "Two Little Song Birds," "Way Up In The Sky," "Bear In The Woods," and "Three Singing Blue Jays". Many songs and poems are available on the Internet.

Physical Activity: Small and large gross motor development with rolling down hills and climbing up them, hiking in the woods, tobogganing, building snow structures, playing tag in the woods and playing in the leaves. Daily Physical Activity exercises outdoors.

Hilary Cook-Thompson teaches Junior and Senior Kindergarten at Secord Public School in the Toronto District School Board. She enjoys teaching the curriculum in the natural environment through hands-on investigation, observation, questioning and communicating findings through writing, oral language, songs, drama and art.

Stepping Into Nature

Spring Investigations

From Play to Stewardship

A Forest Kindergarten in Muskoka

By Petra Eperjesi

Follow me, please, follow me, please,
Over here, over here,
It's time to sing our songs now, time to sing our songs now,
And start the day, and start the day!

I sing these words to the tune of *Frère Jacques*, easing my ten Kindergarten (K-pal) students ages 3 through 5 out of the play through which they settle into school each morning. Tiny heads pop up from rigorous investigations, out of snow forts, and from behind hiding places. We make our way to our morning meeting spot in a circle of pines, and the K-pals pretend to "sleep." I sing them "awake" and then together we sing to the sun in the east and invite it to play with us, or wonder where it might be through the long winter months (vacationing in Florida, they have determined). We sing to the wet rain, the soft snow, the colourful rainbow, and predict which weather phenomenon we might see that day. We sing to each other, promising to try to be good friends, and, finally, we sing *O Canada*, standing "straight and tall and still" like the trees around us.

Each morning, Outdoor Kindergarten begins with this ritual: rain, shine, sleet or snow. But from there, every day unfolds differently, shaped by the dynamics between seasonal changes and schedule demands, student interests and curriculum benchmarks. No matter what, at least 50% of each day (normally more) is spent outside, and all decisions great and small are made with a commitment to delivering a play-based, inquiry-focused, child-centred program.

Why Outdoor Kindergarten?

I grew up wandering the forest and exploring the creek by my home on the outskirts of Waterloo, Ontario. I spent a great deal of time alone, quiet, perched in a tree, or hiding in the whispering, cathedral-like spaces between rows of corn in the fields that surrounded my house. As an adolescent, I paddled the deep lakes of Temagami and the wild rivers that lead to James Bay in northern Quebec and Manitoba. As a young adult, I apprenticed on organic farms in the Maritimes. In short, I love to be outside. And so, when the opportunity arose last spring to develop and implement an Outdoor or "Forest" Kindergarten at Tawingo College, I seized it.

A summer's worth of reading informed and grounded that intuition, and gave me the language with which to articulate the goals of and reasons for the Outdoor Kindergarten program. David Sobel suggests that there is a common childhood experience shared by those highly creative adults who study the earth and work to protect it: extensive, unstructured time outside under the wing of a caring adult who models respect for the natural world.

Now, nearing the end of this first year of the program, I have a visceral feel for the "why" of Outdoor Kindergarten: because those who spend time in the natural world come to feel connected to it, feel delight in it, start to wonder about it, want to study it, and ultimately, try to protect it. When asked what I do, I know that my work – indeed my hope – is to be the caring adult about whom Sobel writes.

You Can Do It!

Early in the school year, some of my students approached the challenges of Outdoor Kindergarten with trepidation. At the sides of creeks they now jump without second thought, they once balked as if I were asking them to leap off of some great cliff.

If you are thinking, "I can't make this leap. I can't teach outside. I don't know anything about nature," please, think again. Aside from the outdoor experiences described above, I have no special training for teaching Outdoor Kindergarten. I studied Philosophy and French in undergrad, and received my Masters degree in Child Study and Education from the Jackman Institute of Child Study at the Ontario Institute for Studies in Education (OISE). Before beginning the Outdoor Kindergarten program at Tawingo, I taught Grade 1/2 there (inside!) and, prior to that, I taught ESL in Honduras.

If you love, respect and are curious about the natural world, you are equipped to take your class outside. To teach outside, we need to be caring and reverent. We need to nurture curiosity and wonder. We need to ask lots of questions. But we don't need to have all the answers.

But How? Planning, Adapting, and Pacing

One of the best pieces of advice I received as a pre-service teacher was to always know why I'm doing what I'm doing with my class. In the few months before the Outdoor Kindergarten program

at Tawingo opened in September 2012, I honed a large collection of ideas into five essential values that now ground and guide my practice: child-centred, play-based, inquiry-focused, authentic and holistic. At the same time, I examined various typical age of acquisition charts for the early years, the Ontario Kindergarten and Grade 1 curricula, and revisited my experiences as a Grade 1/2 teacher in order to determine concrete benchmarks in terms of literacy, math, physical development, etc., toward which I would be consciously working with my students.

This process of sketching out benchmarks and focusing my pedagogical philosophy enabled me to conceive of a vision for the entire year in the design of our daily, weekly and yearlong schedules – the next major step in my planning process. Of equal importance, it allows me to be responsive in my practice, flexible enough to change plans according to seasonal changes, extreme weather, student interests and energy levels.

I had initially planned that the K-pals would begin their day with meaningful, seasonal work, but quickly found that their desire to integrate themselves with the older students took precedence over my plans. As a school, we value the close relationships between all of our students. What I had imagined as an hour each morning at our tree house, became only two days a week in the fall, and not at all in the winter, because K-pal independence in bathroom and dressing routines took priority over getting out the door quickly. Because we were spending so much time getting snowsuits on and off, I had to integrate some of my teaching toward math and literacy benchmarks into that time. I painted a number line on the floor in our dressing area, for example, and had the children practice recognizing numerals, basic counting skills, or simple addition and subtraction (depending on their age and stage) by walking (or dancing) on the number line while getting dressed or waiting for others to finish. When routines ceased to be fruitful or interesting to the group, I let them go and built new ones in their place.

What hasn't changed since the beginning, though, is the sense of rhythm that, following a Waldorf idea, I try to maintain throughout the day. According to Jack Petrash in *Understanding Waldorf Education*, Waldorf Kindergarten teachers attempt to imbue each day with the rhythm of the breath: inhalation and exhalation, contraction and relaxation. My students begin their day in unstructured play, in relaxation. They are then ready to be called into a more structured time – into inhalation or contraction – before relaxing again into recess and outdoor exploration time. The afternoon follows in the same pattern: after lunch recess (exhalation), we have very structured literacy centres time inside (inhalation), and then end the day with outdoor play (exhalation).

Similarly, I continue to allow for long blocks of time for the children to get outside and really settle in to their play. Planning for these chunks of time makes it possible for three, four and five year-olds to get their snowsuits on by themselves, to climb the top of a big, slippery hill by themselves, and to work up the courage to cross a log bridge by themselves. It allows for the corresponding senses of independence, confidence, perseverance and accomplishment.

Learning through Inquiry

These extended blocks of exploration also allow for inquiry-based teaching and

learning to occur. When my students have the time to really get into a place or an activity that interests them, I am able to respond to them and take those interests further through questions in the moment or through more planned activities. At Tawingo, there are kilometres of maintained trail leading to the summit of Eagle Mountain, to Birch Beach, and to the outdoor home of the Kindergarten (K-pal) class – the Range Field Tree House. There are stories to be shared at the Tree House, bread to be baked at the outdoor oven, and, off the beaten track, swamps to get stuck in, caves to crawl around in, and creeks to follow.

As the K-pals came to know each of these places, they came to a sense of their own place at school, and Tawingo became theirs. Soon they were showing me short cuts to familiar and already beloved areas. I recognized their interest in and sense of place as seeds that, if properly nurtured, could grow into a long-term, interdisciplinary inquiry into maps and mapmaking. Indeed, six months later, having begun with a conversation around the snack table about what a map is, having hunted for and attempted to follow maps all around Tawingo, and having made our own large-scale map of Tawingo, we continue to wonder about maps, and we now have plans to map Tawingo's topography in salt-dough, with the shoreline demarcated by yarn.

The maps project is an example of inquiry-based learning happening as a result of allowing my students to settle into something that interested them. I was prepared to respond to it in the moment through thoughtful questioning and by planning activities to stretch and stimulate further their interest.

What About Curriculum?

As a teacher, part of allowing children the time to explore freely, to discover points of interest that lead to inquiry projects, and to accomplish challenging tasks independently is knowing that I am also covering the bases in terms of meeting the necessary academic benchmarks. My sense of security in this is the result of planning – building in routines and carving out small chunks of time for direct instruction around and sometimes within those long blocks of free exploration. I also consciously work to capitalize on any opportunities to practice targeted skills as they arise throughout the day, in context, meaningfully and authentically. For example, when we note how many K-pals have yet to arrive each morning, when we determine what sort of sticks would be perfect for the fort we are building, and when we divide and pass out snack twice each day, we are practicing such important early math skills as counting, comparing, sorting and ordering. Similarly, we develop the phonemic awareness and letter recognition skills central to early literacy while segmenting phonemes on a hike ("I spy something that sounds like / r/ /o/ /k/!"), hunting for "Y sticks", or chanting instructions and making silly substitutions in rhyme – "Don't forget your backpack, and meet me at the door!" becomes "Don't forget your snack pack, and meet me on the floor!"

I have also had to change the way I view my role as a teacher, particularly the amount of time I spend on planning versus reflection on a day-to-day basis. I have already described my intensive planning process before the school year even began. Now, I find myself spending more of my prep and after-school time reflecting on the observations and notes I've taken throughout the day. This time

spent in reviewing the day allows me to notice the learning that was happening without my having planned it. One morning in February, my students became very engrossed in building a snow castle, even before we had done our opening routine. Their momentum and enthusiasm for the project led me to realize that it was too rich to interrupt, but it was only after reflecting upon that sustained hour and a half of play that I realized how many curricular areas we had covered.

We utilized science when we noted that the snow that day was icy and crunchy, perfect for cutting out blocks. We remembered how, on other days, it had been light and soft, perfect for piling up and jumping into and, on still other days, it had been heavy and wet, good for rolling snow balls into snowmen. We did math when we determined which sizes and shapes of snow blocks were best for each part of the wall (foundation, middle, top) and when we found that blocks piled irregularly as opposed to directly on top of each other made for a stronger wall. We developed social skills when we fell into different roles (block cutter, delivery person, builder), and when we worked together to carry the heaviest blocks over to our emerging castle.

Building in long chunks of the day for free exploration and smaller moments of direct instruction, preparing for and making use of teachable moments as they arise, and shifting from a planning-heavy to a reflection-heavy focus outside of school hours has allowed me to facilitate inquiry-based learning as well as to meet the expected curricular benchmarks.

The Positive Benefits

As noted earlier, my thinking and decision making as a teacher of the Outdoor Kindergarten program is heavily influenced by David Sobel's contention that stewardship is cultivated in very young children simply by allowing them extensive time outside with an adult who models care and respect for the earth. I am constantly working to be one of these models in the lives of my students, and I am starting to see the effects of my efforts and of the time spent outside.

My students ask to be outside, no matter the weather. They grumble when it's time to go in, but they also settle in to "desk work" with more enthusiasm than I think they would if they were not outside so much. They are confident, independent, persistent, and resilient. The self-talk while crossing wobbly log bridges, climbing steep hills and covering uneven terrain has changed from "I can't do this" to "I'll do it!" and "I did it!" They stuff their own pockets with the pieces of garbage they collect, and get excited when they see wildlife. I am particularly impressed with how easily and freely they express an appreciation for beauty, how they will sit quietly for extended periods of time, of their own volition, just sitting, watching, thinking.

In a children's literature collection I discovered in Tawingo's library this year, I found this passage, by Chief Dan George:

> *If you talk to animals they will talk with you and you will know each other.*
> *If you do not talk to them you will not know them and what you do not know you will fear.*
> *What one fears one destroys.*

This is the development from play to stewardship Sobel describes: if they play with the natural world, our children will come to know, love, and try to protect it. This is the ultimate goal of the Outdoor Kindergarten.

Petra Eperjesi is completing her first year of teaching Outdoor Kindergarten at Tawingo College near Huntsville, Ontario. She is an avid traveller and learner of languages and she is currently exploring Central America during her holiday time. When at home in Muskoka, she loves to cook, bake … and follow celebrity gossip.

The Outdoors: A Provocation for Early Learning

A Profile of Early Learning in Northern Ontario

By Sharon Speir

Young children are naturally curious. And, naturally, they are curious about what is going on outside. Check a child's pocket after an outdoor excursion and you will find it filled with treasures - a stone, a shell, or perhaps a stick!

Over the past three years, Early Learning teams in Northern Ontario's Rainbow District School Board have made outdoor learning an important part of the school day.

With the emphasis on inquiry and play in Early Learning (Kindergarten), the Early Learning teams have found that the outdoors provides rich learning opportunities, ones that both children and adults enjoy in all seasons.

According to Celeste Ovens-Lamothe and Amy Rose at Northeastern Elementary School, this winter offered exceptional outdoor experiences:

The children had been busy discovering the snow, making angels, sliding, making snowballs, snowmen, and snow-forts, and uncovering the ice that had formed in a few spots on the playground. They were also keen on collecting ice chunks, making ice towers, and bringing the chunks inside and observing them melt.
As part of our inquiry on snow, the children were asked to look around them, and to find a place where the snow or ice looked interesting.
They were then given the camera, and took these photos.

I found a ball of snow. It was a tiny, round snowball.
I wanted to bring it inside. I wanted to show everyone.

Ice is fun to play in because you can break it.
It actually looks like chocolate.

We were going to make snow angels, but we buried ourselves.

These photos not only record the children's perspectives and their observations, but more importantly, they capture their sense of joy, wonder and growing awareness.

The educators of Reggio Emilia preschools in Italy have studied the relationship between children and the

places they inhabit – a relationship they call 'a dialogue with place.' The Early Learning teaching teams in Rainbow Schools are naturally curious to learn more about the relationships between children and the world around them.

The teachers and early childhood educators intentionally design classrooms with the kinds of treasures children collect – rocks, twigs, shells, nests, leaves, seeds and nuts. These traces of the outdoors, brought inside early on in the school year, signal to the children the type of learning adventures they are likely to experience here: a daily reminder that the connection between outdoor and indoor learning exists in this space.

Inside, children observe, explore, investigate and use these natural materials to represent their ideas.

The open-ended nature of these materials invites children to use their imaginations. Young children's aesthetic capacity to use natural materials is quite evident in this example from Princess Anne Public School.

I went to the Toronto Zoo and swam without a lifejacket. The babies in the middle are wearing lifejackets. The brown jewels are mommies and the green ones are daddies.

Still, the indoor environment is not a substitute for the ever changing, ever engaging outdoor spaces that can be visited and revisited on a regular basis. Outdoors, children bear witness to changes over time, as fall gives way to winter and winter gives way to spring.

Emily Caruso Parnell is a teacher at Alexander Public School and she champions outdoor education:

No matter how much time I spend designing the classroom environment to be interesting, beautiful, and engaging, I can't hope to compete with the endless variability and beauty that nature has to offer. We are creatures of nature; it is our habitat too! The depth of thinking that is sparked by being outside cannot be matched within these four walls.

She adds:

I always notice a difference in the children after they've been outside. They are more relaxed and more focused. School needs to be bigger than what happens inside the four walls of a classroom because we are bigger than that!

In the Rainbow District School Board, an outdoor learning block of 60 minutes has been included in the daily schedule for four and five-year-olds, weather and appropriate clothing permitting. The intention of this outdoor learning time is to have the children engage in what we call 'wonderings'.

We want children to have sufficient time outside to become deeply absorbed in exploring, investigating and communicating their discoveries. Naturally, this outdoor learning migrates indoors where children test their theories, do additional research and represent their thinking, often through the arts.

Educators consistently report the positive effects of daily, extended time outdoors. Negative behaviours that may

occur inside are diminished. Children are more settled following outdoor adventures. They say that outside time is their favourite part of the day.

By scheduling outside time while the rest of the student population is indoors, children have space to roam the playground space unencumbered by the rules that are enforced when the playground is full of children playing a variety of games. In addition, adults take the children on walks to visit green spaces in the community close to the school.

Children gravitate to the trees, the hedgerows, the puddles, and the freshly fallen snow, often comparing what is going on today with what is different from the day before.

Emily Caruso-Parnell related the following:

Our most recent community walk coincided with the coldest day of the year so far. Hardy Canadians that we are, we bundled up, some of us so tightly that we could hardly move. While it was very cold, it was also a beautiful day and, once we were in the shelter of the Roxborough Greenbelt, we felt surprisingly comfortable. We went looking for animal tracks and found lots of tiny tracks crossing the path and leading to the base of a tree.
Was this someone's house? Whose? Most of the children guessed that it was a chipmunk or a squirrel, judging by the size of the tracks. As we continued, we could see Junction Creek, which had just begun to freeze near the banks. The children hypothesized about what kinds of animals might live in the creek - fish, frogs, beavers, lizards, ducks and crocodiles! As we climbed back up the hill, we noticed an older beaver cut, which confirmed some of our thinking. We walked a little farther down the path this time and the children enjoyed terrifying the adults by sliding down the hills.

While the outdoors presents children with physical, social-emotional and intellectual challenges, children see the outdoors as a place where they can test their ideas and achieve their intentions.

The children in Nadia Berardelli and Meredith Thomson's class at Princess Anne Public School, inspired by the construction going on at their school three years ago, wanted to build a tepee like the one they had seen in a book they were reading together.

Familiar with the bush on the periphery of the school, they found the materials they needed and, with a little help from their adult friends, hauled and carried huge branches to create an amazing tepee. This was a significant event in the emotional life of this class. The children experienced what it means to be a community; they came together as a group to accomplish this challenging task.

Once the snow arrived, the children were curious about how they might cover the tepee to make it warmer inside. They began investigating the types of materials that would create and retain warmth.

Often, changes in weather patterns provoke conversations that lead to inquiries. At Charles C. McLean Public

School on Manitoulin Island, children reflected on a stormy night. Teacher Robyn Best and Early Childhood Educator Julie Wright asked the four and five-year-olds a simple question: "What do you notice outside today?"

This prompted many responses:

It's snowing out and there is lots of snow on the ground. But where there are trees in the way, there is no snow on the ground.
The tree is blocking the snow from going underneath the tree.
Snow is falling down to the ground.
Snow is coming down and making the branches break off.
In the courtyard, there's snow in there too. The part of the courtyard has no snow.
Outside by the climbers, it's icy.
You can't slip slide around the trees and you can slip slide on the ice.
The ground is really slippery.
I have a wonder. I wonder what snowflakes look like? Should we bring a magnifying glass out?
How about we catch one and then bring it inside to look at it?
It will melt on us.

"What do you notice?" starts a dialogue about what the children see. In this dialogue, you can hear the children's observations, beginning theories and questions about how their environment changes when it snows.

This example of 'knowledge building discourse' is described in *Natural Curiosity: Building Children's Understanding of the World through Environmental Inquiry*. In a circle, children share their ideas based on a question or topic. This often gives rise to more questions. One of the educators records the children's ideas and questions and revisits their thinking with them later, after they have had an opportunity to test some of their theories.

In the brief discussion about the changing landscape outside their window, there are some wonderful entry points for future work – an examination of the characteristics of snowflakes, what happens when snow lands on different surfaces, and other questions such as How, when and where is ice formed?

Where the inquiry goes next really depends on the interests of the children and the educators. The educators pay attention to what topic or question appears to have energy. They might choose from a list of questions that most interest the children, or select a question that is particularly relevant and invite the children to join them in an inquiry.

Tara Thall and Ramona Shawana of Princess Anne Public School describe in their blog for parents, an inquiry that began with a gift:

During our meeting time today, the children were presented with a gift from our lunchroom supervisor Loreen. She brought them pictures of trees that she had taken in front of her house and on Manitoulin Island. The children had discussions about trees and their leaves. "What do we know about when leaves fall to the ground?" The children said:

- *My dad told me this, that when the leaves fall off the trees it's the fall.*
- *Because some of them are starting to get red.*
- *Look outside and look at the trees, the trees are kinda changing colour but the ones that are big aren't changing colour, cause that means it's summer.*

One of the children then announces, "It is time to go for a walk in the woods."

The children explored the woods, looking at leaves, sketching trees and gathering materials. A small group of children were encouraged to use the ground as their palette to create art with the natural materials they had discovered.

Inquiries often begin with questions posed by children. During the reading of *"How to Catch a Star*," children from R.L. Beattie Public School engaged in a debate about whether the character in the book saw a reflection or a shadow. Educators Julie Kelly and Lynne Lundrigan asked: "What is a shadow and what is a reflection?" Together with the children, they decided to study each concept and then compare them. Listen in on the initial exploration of shadow in this French Immersion classroom:

What is a shadow? C'est quoi un ombrage?
What do we know about a shadow?

- *It's black.*
- *You can make a shadow with a flashlight.*
- *Outside you can make a shadow with the 'soleil'.*
- *I can make shadows on my wall at night.*
- *Shadows don't have a colour.*

The children came up with the idea of creating shadow plays using the French songs they sing in class.

As children explore the concept of a shadow, their thinking is influenced by inside and outside experiences. Here are the children's later thoughts on the same topic:

- *Shadows are black and gray.*
- *The 'lumière' can't go through the puppet unless there is a hole.*
- *Shadows move with you.*
- *'L'ombrage' is fun to play with. You can make animals with your hands and with cardboard.*
- *You need light to make a shadow.*

The outdoors serves as a provocation, pushing children to reconsider their thinking when what they imagine is not consistent with what they experience.

Here, a child notices that his shadow is in front and not behind him as he expected.

Hah! There it is and now he knows what to do!

There is a kind of dialogue going on here between children and nature, a reciprocal relationship that validates both the child and the outdoors. This interaction appears to be one in which an action produces a reaction and a question evokes a revelation. In the outdoors, children's thinking becomes visible as they break off a piece of ice, for example, and notice that ice is like chocolate.

This "dialogue with place," identified by the educators of Reggio Emilia preschools as they documented children's interactions with the world around them, led them to consider how the identity of an individual is formed by the place they inhabit.

What possibilities and potentialities for learning are shaped by outdoor experiences in Early Learning – Kindergarten? How do children's relationships with local natural spaces shape their sense of identity, their growing understanding of nature and the natural world around them? How might outdoor experiences shape the trajectory of their learning?

As children observe, theorize, experiment and revise their thinking about the big ideas of life and social sciences, and represent and communicate their experiences and understandings through language and the arts, the curriculum connections are evident, authentic and meaningful.

As educators in Rainbow Schools become more attuned to this relationship and listen to the dialogue between children and place, they gain a renewed appreciation for the importance of the outdoors – an extraordinary place that provides a context and a force that shapes and infuses life into learning in Early Learning – Kindergarten.

Dr. Sharon Speir is the Superintendent responsible for Early Learning and Child Care in the Rainbow District School Board. Her educational background includes a BASc in Child Studies, and a MEd and PhD in Curriculum: Teaching and Learning. She has had the privilege as a child to spend lots of time outdoors, and over the course of her career, of working with toddlers to teenagers in childcare, recreation and school programs.

Sharon would like to extend her thanks to the Early Learning teams who contributed to this article and who through their work invite us all to reconsider the importance of the outdoors in developing learners.

References:

- *Early Learning-Kindergarten Program Document* (2010) Ontario Ministry of Education
- Voices From the Land: Exploring Language and Landscapes, Art and Culture
- Richard Louv (2008) *Last Child in the Woods: Saving Our Children from Nature Deficit*, NC: Algonquin Books of Chapel Hill
- The Wonder of Learning: Dialogue with Places

Walking Wednesdays at Rouge Valley P.S.

If the classroom is meant to prepare students for the 'outside world,' why are we not taking students outside more often?

By Brian Daffern

The above question has fuelled my desire to make learning fun and connected to the real world. I wanted to create meaningful learning opportunities based on inquiry and discovery. I wanted my Grade 2/3 class to experience a sense of wonder about both the curriculum and the environment. I also wanted to energize myself, improve my daily practice, and share my personal passion with my students. Investigating both natural and manmade features in the local community achieves these goals and allows students to make meaningful connections about the world in which we live.

My first step towards creating a weekly place-based education program was to approach the principal. I assured her that the time spent outside was safe, based in research, and that each student had the required permission form. To overcome the supervision challenges of taking young students across busy suburban streets, I approached my school colleague, Patrick Cheng, an Intermediate Special Education teacher for help. Patrick's small class size and Educational Assistants provided the supervision ratios needed to create a safe experience for all. Together, we developed a weekly walking program

affectionately called "Walking Wednesdays."

Each week, the regular program is enriched by learning in the schoolyard, community and a local ravine. These "placed-based" environmental activities are integrated into the curriculum, meet the Ministry's environmental policy found in Acting Today, Shaping Tomorrow, and become a jumping off point to cover curricular expectations in Science, Social Studies, Language, Math, and the Arts.

Typically, after reviewing safety rules, the group starts off on a one-kilometre walk through a residential community en route to the Rouge Valley. Along the way, curriculum topics such as numeration, geometry, simple machines and structures are integrated by pointing out the design features found in bus shelters, cars and buses, and by playing games such as "I Spy", e.g., "I spy with my little eye a quadrilateral with equal sides and four right angles." Students then scan the houses and road signs for squares. The class loves trying to outsmart the teacher. Students also practice counting odd and even numbers, adding two digits, looking for geometric figures, parallel lines, and much more.

Once in the Rouge Park, the students embark upon inquiry-based activities that are connected to the science and social studies curriculum. Activities include investigating insects, looking for animal structures such as burrows and nests, studying seed dispersal, and following animal tracks.

Other activities include the following:

- Sifting and examining soil samples
- Participating in an archaeological dig with the local conversation authority
- Contrasting urban and rural communities by investigating aspects of our urban community, followed by a trip to a rural village
- Investigating multiplication by looking at windows and garage doors for arrays
- Discovering parallel lines on fences
- Recognizing geometric shapes on buildings
- Observing seasonal change
- Identifying simple and compound machines in the community
- Learning cardinal directions and map making
- Partnering with "Friends of the Rouge Watershed" to plant trees.

After an hour, the students return to the classroom where concepts are reviewed, descriptive words are brainstormed, and reflections are written. As a result, the students are able to write longer, more detailed pieces immediately following the walks.

Later, computer activities continue to enrich the program, develop curriculum links and provide opportunities to evaluate student understanding.

Not only do these activities provide a way to differentiate instruction and meet a variety of learning styles, but they are also loved by the students.

> *Walking Wednesday is a great way to learn because you learn about animals, insects, and nature. You get to learn by going outside. You get to see things, hear things, smell things, and touch things. So when you go outside you're still learning!*
>
> *(Aasif, Grade 3)*

The walking program became a model for Outdoor and Experiential Education and Special Education integration. However, over time, it has gone through many changes since its initial creation in 2008. Class assignments and timetable changes have impacted the program.

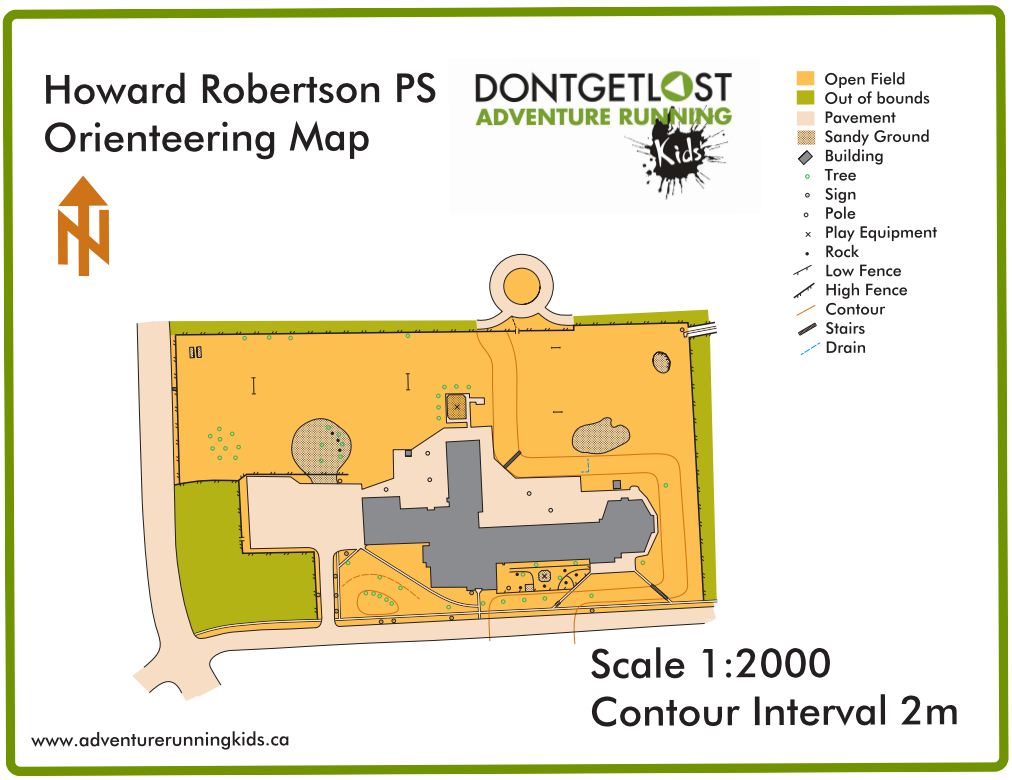
Patrick no longer teaches special education, causing me to look for other ways to carry on the program. I have now partnered with the school's librarian Karen Vanderhoen to help provide supervision. Karen is enthusiastic about nature and has been able to add her knowledge of the outdoors and literature to improve the program further**.** As well, the school has adopted a five-day cycle timetable. As a result, the program no longer takes place exclusively on Wednesdays, but rather on Day Two, causing it to float throughout the week due to holidays. Despite these changes, the program is very worthwhile, and well worth any logistical challenges.

Brian Daffern is a Grade 2-3 teacher at Rouge Valley Public School with the Toronto District School Board. He is also excited to be working with junior students next year so that he can extend his inquiry-based activities. Check out the following blog to learn more about "Walking Wednesdays."

Headed In The Right Direction

A Grade 4 class takes on orienteering in their own schoolyard.

By John Howison



It's not here! It's not even on the map! Look, I'm right here and the map shows the tree right here
... ohhhhhh, it's over <u>there</u>!

And off they run. *Running*. Run to the post and back. Do 10 laps of the gym. Boring. Or worse. Running can be such a hard sell for kids, unless there is a reason. I've never seen a kid give up on a soccer breakaway because running was getting annoying. Nor have I ever seen boredom cause someone to stop running from a chasing dog. So, how can we replicate these real, intrinsic motivations at the school? Adventure Running!

Adventure running, or orienteering, is similar to a treasure hunt (albeit with pretty disappointing treasure) where the journey is the point. Controls, or checkpoints, are set up around a defined area. In the case of a school, the playground is the area. Kids receive a map with the controls marked on it, orient the map properly so that everything "lines up", and then get hunting. Students are self-motivated and work independently from each other while using the same course. Mix up the order they visit the controls in and following one another is impossible. Once kids lock in on the general direction or specific location of a control, they run. They don't walk, they don't jog, they run as a fast as they can to find the control, mark their map, and move on.

Oh man...#5 is all the way over by the fence on the primary side.
I had to run [pant] back and [pant] forth like 10 times!!!

Lots of kids don't have the desire to run or the stamina to race through the entire course. That's OK. The course-maker (you!) can decide how many controls you want each student to find, and in what order. This is what makes it so easily differentiated. The fastest, most ambitious kids can be given controls to find in an order that zigzags back and forth across the playground. Other students can be given a more circular, efficient route. The number of controls each student is responsible for can also be changed to suit different students.

How did you make this map?? It even has the drains marked on it!

So, how can you get started? There are three basic components: maps, controls, and kids. The first thing you need is a map of the playground or park you'll be using. We used our playground because it's big, has lots of features, and is safe. There are two basic ways to get your hands on an orienteering map. Have one made for you … or make one yourself. A regular map of your playground won't quite cut it. Orienteering maps are special because of their level of detail. Rocks, vegetation (thick/thin forest, open land), boulder gardens, fences of various kinds and small cliffs are labeled to make precise navigation possible. Our playground has few of these natural features, so we needed a map with posts, buildings, trees, playgrounds, rocks, and sandy ground. The mapping process transforms the playground for the students. Baseball diamonds become 'sandy ground', backstops are 'high fences'. We had one made by Don't Get Lost Adventure Running which runs an adventure running program in various cities in southern Ontario. Their cartographer came and mapped our playground and emailed me a .pdf for use free of charge. I have also made a map of our playground using Google Maps and Adobe Photoshop Elements, which is a free download. All you need to do is zoom in on your playground using Google Maps and take a screenshot. Next, open the screenshot in Photoshop and place the features you want overtop of where they are in real life. Put together a legend and you're done. I'm far from a Photoshop expert (as the product illustrates) but the most important thing is getting enough features on the image for students to be precise as they locate the controls. A third option would be using the Google Maps image and drawing features on by hand. Map reading is the critical component; map quality is not.

The control must be right here. #2 is in between these two rocks right … over … THERE IT IS!

Orienteering controls are usually three-sided nylon flags that with each rectangular side split an orange and white triangle (see photo). For us, there were two problems with the professional controls. First, they cost $6 each. Second, while they are a good size for use in a forest where vision is obscured, on a wide-open playground they're too visible. We made our own by printing out examples found online (the Wikipedia page for 'orienteering' has a good example), laminating them and stapling them. I used a stir stick to put them in the ground. Next, I attached a crayon to each control for the kids to colour in a box on their map to prove they've reached each control. Traditionally, there is a punch with different patterns for each control but, again, crayons are cheaper and easier.

So, where is #7 ... right out there in the middle of the grass?
Well, we could just go to the north post and walk straight out towards the sandy ground and we will hit it.

Is it possible that the context of the playground saps the nature out of it? That this massive, open area is so inextricably connected to the school experience, and the routines of recess, that students no longer see any magic or find any curiosity in it? As I mentioned above, the detail of the map combined with the necessity of using these details fills the natural features of the playground with life and meaning. The orienteering/ mapping terminology in the legend encourages this. "*I can't find #4!!!"* allows a teacher to walk the student through the steps to find that control. "Where are you? How do you know? What landmark do you see near #4? How can you get from here to that landmark?" It's real, experiential education. Without using map-reading skills, kids won't find the control. The purpose is self-explanatory and the motivation is very real.

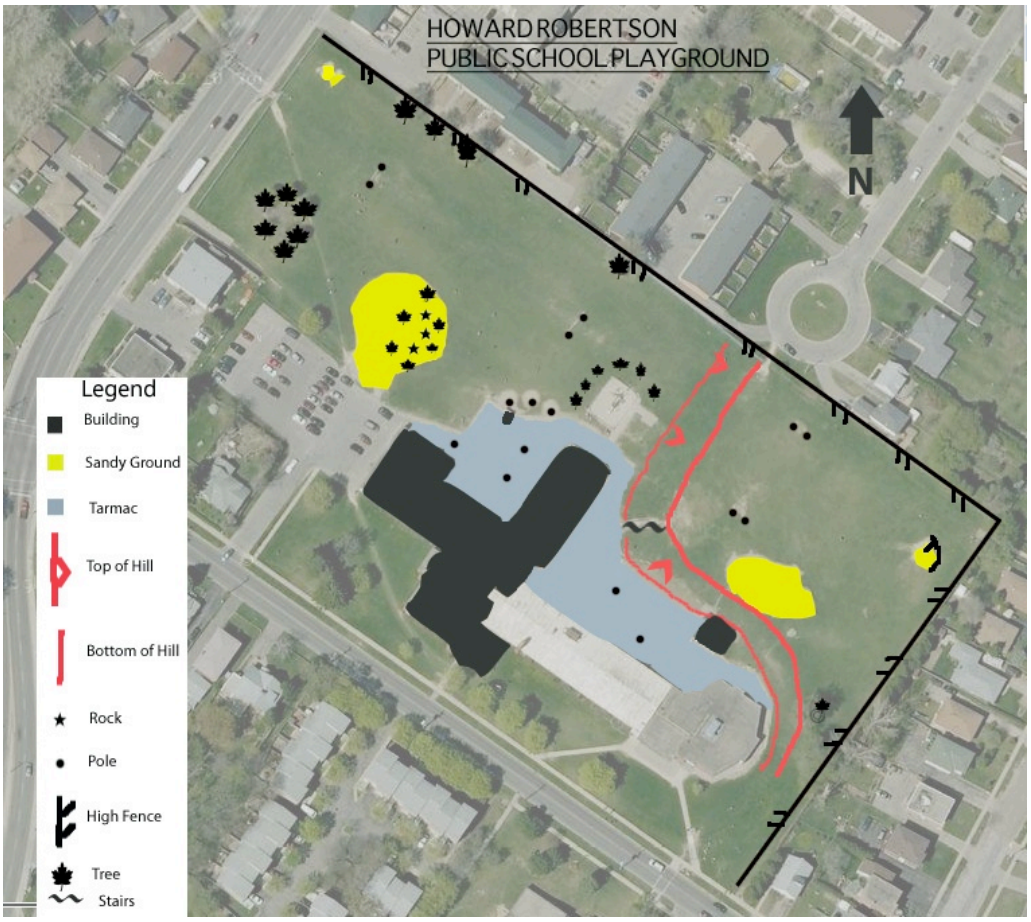
It's really wet out there, I'M GLAD I BROUGHT MY BOOTS!!
Did you put any controls on the hill?
How many controls are there??

Every meeting becomes an event. The anticipation of receiving the map and taking off is like watching horses chomping at the bit. It fills the playground with mystery. They have no idea what the playground has in store for them. Because of the relatively barren nature of the playground, sometimes they can see some of the controls before they begin. This is o.k. because the order of controls has yet to be revealed.

The skills of orienteering blend easily with both the Social Studies and Mathematics curriculum. Map reading, using a legend, scale and identifying the location of objects based on their location on the map. From grades 1-8, there are expectations that match well with orienteering. The Physical and Health curriculum stands out in particular, advising that students *like to be involved in making decisions and should be given opportunities to analyze movement and activities, to offer suggestions for improving their skills, to modify activities to give themselves the right level of challenge.* (Ontario Health and Physical Education Curriculum, 2010)

There has also been an unexpected environmental appreciation component. Weather. While running this program during the spring (a spring featuring an unrelenting winter) the kids have become aware of the inseparable connection between the weather and time outside. They see controls in 'sandy ground' and immediately the conversation is about the mud. On days where the temperature is below zero the hill dominates the chatter. These conversations happen through the stretched grin familiar to those of us who have ever embarked on an outdoor activity with threatening skies overhead. When they're battling not only the map and the land but also the weather, they seem to enjoy it even more. That said, whoever does the laundry may not agree.

John Howison teaches Grade Four at Howard Robertson Public School in Kitchener for the Waterloo Region District School Board. Aside from beginner attempts at orienteering, he likes to ride his road bike, get caught up in the world of sports through podcasts while running, and make homemade French fries and chicken wings.



Created with the help of Google Maps and Adobe Photoshop Elements (a free download)

Akinoomagzid and the Coyotes: The Mother Earth Mentoring Program

By Gina Marucci and Tiffany Barber

We would like to begin by acknowledging the territory of the Chippewas of Georgina Island, where our program is housed.

"Akinoomaagzid" is the traditional name for the Mother Earth Mentoring Program (MEM) given by Elder and Ojibwe Language teacher Barb McDonald of Waabgon Gamig First Nation School. It means "to be taught, all the teachings come from the earth, and we honour them." Thus, from an Anishinaabek perspective on education, Mother Earth is the original teacher and classroom.

Now in its second year, the MEM Program is a cross curricular program that has students out on the land learning naturalist skills and developing nature awareness while at the same time integrating big ideas from the Ontario curriculum. The program runs through the entire academic year, from September until June.

The MEM Program refers to the segment of the week where our students are outside learning under the guidance of Coyote Mentors, community teachers, and school staff. It has two main parts; a one-hour session with the primary class and a four and half hour session with the junior

class. Both sessions include an in-class and an outside component. Themes from MEM are drawn primarily from the Science and Social Studies curriculum, while being further expanded into Literacy, Visual Arts, Native Languages, and Cultural Studies. The MEM themes follow the natural cycles of the seasons. They include food, plants and ancestral species, wilderness living, trees, tracking, bird language, creepy crawlies, and habitats. Linking into the natural cycles harnesses the energy of the students and builds on their current interests as the island welcomes each season.

The Coyotes

One day a week, Coyote mentors come to the island to guide our students in their learning on the land. They are trained practitioners of the "Eight Shields" model adopted by Jon Young who has developed a philosophy of reconnecting people to the natural world as outlined in his *Coyotes Guide to Mentoring.* They have a passion for connecting to the seasons, recognizing changes in nature, cultivating awareness in others, and helping people develop a universal connection to the land that fosters a sense of gratitude for the nature that is around us, regardless of where we live, our cultures or traditions. While they love working with the Waabgon Gamig students, they share the goal of the Chippewa in building a program that will develop local Coyote mentors.

Coyote is a shy animal, but (s)he overcomes this when curiosity strikes … just like our students. Like all animals, Coyote understands that it is part of nature, not apart from it … a lesson our students also come to learn. It builds dens, finds shelter, eats, sleeps, avoids danger, heals when hurt and, of course, plays. We believe these are essential traits for our students and we have incorporated much of this animal's behaviour into the program. When students are dispersed, a group howl brings everyone in. They come together as a pack and they support each other. A hand signal showing coyote ears is the signal to listen.

When the Coyote Mentors are on the island, there is a phenomenal energy at Waabgon Gamig First Nation School. They create excitement as they bring mysterious items stored in handmade baskets and pressed felt bags. The objects include deer legs, buckets of maple sap, obsidian blanks for flint knapping (the art of making stone tools), cedar blocks for carving spoons, animal skeletal material, casts from animal tracks, and clover flower buds.

Students greet our mentors with hugs and share with them their outdoor experiences and animal sightings from the past week. These are often followed by challenging questions from Coyote that plant themselves firmly in the student's brain, waiting to be nurtured by the day's adventures. These questions are purposeful and meant to push students to develop a critical awareness of their nature observations. Students patiently wait to hear their challenge for the day and sit eager for a story from Coyote that peaks their interest, gets them questioning and wondering.

Through the Coyotes, our students begin to strengthen their own personal connection to the natural world and its cycles. They build their self-confidence and begin to alter the long, often negative history that is associated with the education system and First Nations students.

Sparkles from the MEM Program

A common discussion among the staff and Coyotes includes a recounting of what

we refer to as the sparkles in the eyes of students. Each outdoor adventure includes numerous such moments.

We see how the MEM Program brings out many positive qualities in the students: focus, attention, questioning, wondering, teamwork and perseverance.

The primary students participate in a variety of outdoor/nature activities including nature games, tracking, identifying bird calls, maple syrup investigation, building snow structures, and making bow drills. Coyote always come with old skills to practise or new skills to learn. The activities that happen in the primary class lay the foundation and introduce basic understandings and vocabulary which in turn creates excitement for the junior program and leaves the students asking, "When will we get to do what the older kids do?"

What follows is a selection of primary program highlights:

- In late February, the primary children encountered a field of the most perfect packing snow. When they saw and felt the snow, they decided to make snow blocks and, within an hour, had created a 5–7 metre wall, as well as a snow tunnel. Many of the children were exclaiming "This was the best day ever!"
- It was exciting to watch the students as they brainstormed a list of about 15 birds they had seen or heard around the island. They then learned four different bird calls and homes by playing a game. They had to remember which bird made the call and then travel to one of four signs that indicated a type of habitat. The students loved it and, by the time they were outside, they were listening for birdcalls; some students were even making the calls.
- One time, Coyote shared a story about turkey vultures that enthralled the students. Another time, Coyote brought in the skeleton of a baby porcupine and the students were able to explore, touch and look closely at the specimen; they were so intrigued by this experience.
- It was a real treat to witness K-2 students working closely with a partner to start a fire using a bow drill. They showed more perseverance than I ever could have expected.

The junior class spent much of the past year creating a permanent base camp in the traditional sugar bush. They explored the landscape, identified hazards, and located resources to find the perfect campsite. They pushed their boundaries each week, exploring further and further into the woods until they were able to recognize specific trees like they were signposts. They gathered rocks for the fire pit, then each student decorated one with a direction and placed it around the fire to help build their orientation skills. As the year has progressed, the students have built a deep nature connection to this site. They are beginning to notice how its resources and landscape vary widely from the south end of the island. They are noticing the seasonal changes and the animal and plant species that come with this change. And most of all, they are strengthening their own sense of gratitude.

A recent story taught junior students that bird language includes not only listening and identifying specific species by their calls but also knowing what the birds are saying. By the time they got to the forest one afternoon, the students were ready to see, hear and study birds in their habitat. Within hours, students who obsess with video warfare and weapons were 'fox

walking' (this refers to the silent way foxes move through the forest), camera in hand, to capture a photograph of a bird. Their next challenge, part of their wonder research for the week, was to identify the bird.

The last 20 minutes of the day is devoted to a closing circle for the junior class. Each student shares one thing they learned and one thing they are grateful for. The talking stick is usually a unique artifact from the day, a funky stick, a cool fossil rock, or an antler. It is often in these final moments of the day where students capture the afternoon with a simple sentence. One student, after carving around the fire said, "I'm grateful for the past and all the things my ancestors did."

Consolidating Our Outdoor Learning

In the primary classroom, the MEM Program directly connects to various curriculum topics including community landscape, mapping, living things, inquiry, structures, simple machines, drama, and physical education. As a class, the students have created a shared reading and writing book that is a culmination of pictures from each week that the Coyotes visit. This is one way to track our activities, including what students have observed and demonstrated. It is also used to communicate with parents and the community about the program. The goal of the book is to inspire students to want to think, read, and write about their outdoor experiences. Each student also has their own inquiry journal where they are able to ask questions and record observations.

The junior students journal weekly on their MEM Program experiences. They are given time to build "wonder questions" that have developed from an experience, discussion, observation, or discovery while out on the land. They are encouraged to draw on the teachers in their own families who have oral history and specialized knowledge to support their questions. Students choose between different types of journal entries including text, picture, video log, or painting.

In addition to an in-class journal, the junior students maintain a field guide where they record their Coyote Challenges, document their learning, and create personal field guide pages for plants, birds, and various wilderness skills.

Challenges and Allies

Our biggest challenge at the start of the MEM Program was to win the support of the community. With a reduction in traditional classroom time, many parents questioned whether their children would be prepared for the mainland. This speaks to the ongoing struggle that our students have when they transition from learning at a small, community-based school to the mainland school that is much larger and where students often board through the winter (to ensure safe travel to school).

Through an open house organized in the spring of our first year, parents were invited to see the program in action, ask questions, listen to student testimonies, and taste hands-on experiential learning by trying their hand at the fire bow. By the end of the day, one elder from the community stated he loved the program and wished school was like this when he was a child. These sentiments were expressed by many who joined us that day. We continue to build on the school community connection. Students are becoming the go-to people on the island for issues related to environmental awareness and sustainability.

The MEM Program has allowed more

curriculum expectations to be woven into the day by the hands-on learning and ensuing discussions that take place between small groups of students, teachers and Coyotes. More importantly, our students have made deeper connections to their learning. Sparks were flying in their brains when they played Meet a Tree; they were led blindfolded and spent time feeling, smelling, listening, and yes, even licking that tree. And, then, to find that same tree again using their mind's eye connection to these senses; this created a personal connection and a need to know its name, how it grows, what medicines it gives us, and the legends go with it.

As we build this program from the roots of the earth's blanket, we continue to struggle with issues of assessment. How do we evaluate a student's growth in nature awareness? How do we measure the sparkle in their eyes? How do we produce the data that proves the program's success? This has been the focus of our work this year.

Our team recently released the Coyote Skills Guide to the students. It contains 64 challenges divided among four areas, each challenge pushing students further to their edges. Their successes will be recorded on an antler necklace that will be presented to each student at the end of the school year in front of the community. The next step is making direct links between these achievements and the Ontario curriculum. On the day the Skills Guide was introduced to the students, we knew we were on the right track because of the reaction of one student who had thus far remained aloof to the program. He finally sparkled with excitement and, and best of all, he set a personal goal for himself when he declared, "I'm going to complete the Survivor Challenge!"

Reflections

With a strong focus on a protected literacy and mathematics block in the morning, we were committed to the MEM Program not impacting the core components of the curriculum. In fact, we have found an improvement in interest levels towards reading and writing, as students are inherently finding a need to research or feel inspired to record their story of the day.

The positive impacts of the MEM program on the students at Waabgon Gamig First Nation School have far exceeded anything that we would have envisioned for our students in such a short period of time. Students' journals include numerous entries that speak to how the Coyotes and the MEM program make them excited about school and learning. Students who were hesitant to step into the bush last fall now demonstrate an amazing sense of calmness when out on the land. Students who struggle to keep track of their pencil in class manage to be experts at preparedness for the bush. The day-to-day struggles between a small student body comprised of many siblings

and cousins begin to disappear as teamwork and respect have begun to take precedent.

Hesitant readers have begun to pick up field guides to identify birds, bugs, snakes and flowers. They are driven by their own desire to learn a valuable piece of information that has meaning to their lives. They take newly learned insights and share them with parents, grandparents, aunts and uncles to create a dialogue about species on the land and how those species survived in the past, today and into the future. We see students who have found a voice and confidence in a specific skill that gives them value amongst their peers. Students who struggled to write now come to school with journals filled with personal field guides that depict details and measurements of great finds. Students who struggled to maintain focus in the classroom excel at documenting our learning in the bush via a video recorder. The exploration time that is built into the MEM Program allows students to enhance in-class learning and it often plants the seed for further reading, research, and writing.

We are seeing students mentor students. In the first year, one Grade 5 student became a master at the fire bow. To watch him mentor his Grade 3 classmate at this ancient skill showed phenomenal respect by both boys. The older respecting the role he was in – one of teacher and holder of this knowledge which could not be written down or read about but only learned through regular practice of knowing – knowing when the bow was "singing," how to prepare the tinder bundle, where to place his hands, when to stop the bow and ever so gently place the burning ember in the bundle and softly, very softly blow the coal to life. The younger student now respecting his role as student, no longer playmate, to listen, watch, help and wait his turn to honour his mentor with his own successful fire. It is these respectful, peer relationships that we strive for in our classrooms. And each day we are on the land with our students, we see this respect deepen for their peers, the land and themselves.

- For more information about Coyote Mentoring, see:
  Sticks and Stones Wilderness School
  Earth Tracks
  The Pine Project

Gina Marucci and Tiffany Barber are seconded teachers from the York Region District School Board north of Toronto. They work as Indigenous Education Partners at Waabgon Gamig First Nation School, a two-room schoolhouse with 20 students located on Georgina Island, Lake Simcoe. Tiffany works with a Grade SK-1-2 class and Gina with a Grade 3-4-5 class. Both receive strong support from an Early Childhood Educator, a Child and Youth Worker, a Cultural Teacher, several Ojibwe teachers and Anishinaabe elders.
While Gina and Tiffany have followed very different paths to teaching, they both share a deep love of the natural environment and a passion for outdoor experiential learning.

We are thankful for help with translations and several versions of this article from: Tanya Leary, OCT, member of the Roseau River First Nation, 2012 Recipient of the Prime Minister's Award for Teaching Excellence, and former teacher at Waabgon Gamig; Kelsey Trivett, Ojibwe language teacher, medicine keeper and singer; and Jodi Johnston, OCT, members of the Chippewas of Georgina Island First Nations.

Logging on

Teamwork and the fire bow

Running with the Salmon

A local river becomes a curricular centrepiece for Grade 6 students.

By Bryan Bibby Smith

My journey as an educator who uses the outdoors in my daily teaching is the story of my life. I grew up with the Rattray Marsh Conservation Area in Mississauga as my backyard. My daily walk to school involved any number of pathways through the conservation land, crossing bogs and streams. These daily trips connected me with my immediate surroundings and the seasonal goings-on. I did a project on the pair of nesting swans I could see from the kitchen window and how their three cygnets developed one spring and summer. I watched the suckers swim up the Sheridan Creek to spawn with little idea of what they were doing. I cursed the migrating geese with their early morning honking that woke me as a teenager.

It seems only natural that in my teaching I make every effort to connect my students with their immediate surroundings – striving to have them connect with and appreciate the area in which they live. My first teaching job, nineteen years ago, was in a more urban area in Mississauga, which offered different opportunities to connect. We walked through the neighbourhood and looked at traffic patterns, observed which birds were at home here and even did a small stream study in storm control waterway. It was amazing for the students to find the aquatic invertebrates that were living in this ″there is nothing here″ waterway. We returned on several occasions throughout the year and came to make this area part of our learning grounds. The simple fact that opportunities to connect with nature in one's community are virtually everywhere is what this experience taught me.

In 2001, I started teaching at Belfountain Public School in Caledon and I was amazed at the wonderful natural community that surrounded this school. The Niagara Escarpment runs through the area, as does the Credit River and a section of the Trans Canada Trail. The Grade Six teacher, Pamela Gibson, was very forward thinking in her classroom practice. She had established a great integrated program that connected multiple curricular areas with the community in dynamic and engaging classroom projects and activities. I worked with Pamela as a colleague for many years, learning to incorporate some of her practices into my own teaching. We, as a whole school, developed the ECO focus program to encourage all of our classrooms to "Get Outside" and connect our students with the community through learning experiences. We start each day as a whole school with a daily walk/jog on our school grounds. This connects our students with the seasons and the changes they can see. The daily walk also has our students dressed for the weather so we can easily spend more time outside during the day. When Pamela retired, I inherited the Grade Six program including a great partnership with the Ministry of Natural Resources (MNR) and the Bring Back the Salmon initiative.

It is this partnership that brings me to Credit River watershed and it is integral to our Grade Six classroom. It gets my students into the river on multiple occasions over the course of the year. We

help to stock Atlantic Salmon fall fingerlings to start our year. Later, we examine fish species diversity through an electrofishing experience with MNR staff. In the spring, we stock Atlantic Salmon fry into the Credit River. (Fingerlings are simply salmon fry that have spent the spring and summer in the Ministry hatchery rather than in the wild and have grown to be about the size of your finger, hence the name.) These highlight experiences spur the students ask amazing questions related to what we are doing. The questions almost always result in further investigation of the river and watershed. At times, the investigation involves research through books, online sources or community experts. At other times, we return to the river to observe and make connections. For example, a student asked what the fall fingerlings ate in the river, as there was no obvious food source available. That simple question resulted in a several weeks-long investigation of aquatic invertebrates. We searched through books, the web and the Credit Valley Conservation Authority resources learning about tons of different species. We returned in rubber boots to the river to search for these hidden creatures and spent a day finding them, identifying them and connecting them within the complex ecosystem the river represents.

Aquatic Invertebrate: Stonefly Nymph

Spotted Salamander

Classroom projects related to the electrofishing experience connect beautifully with the curriculum. The experience of walking in electrified water confident that the rubber chest waders and gauntlets you are wearing will insulate you from the electricity is an incredibly direct hands-on experience with electrical safety. Learning to identify collected fish based on key criteria is an amazing classification and discrimination opportunity. Measuring and weighing those same fish to later produce a scatterplot graph is a great data management experience. Calculating the volume of the river surveyed has many connections and applications in the math curriculum such as measuring, finding an average and converting to metric units. Creating a narrative about the experience from the perspective of the fish accomplishes a writing objective and the skill of adopting an alternative perspective. And, again, the students are asking rich questions, which offer so many different avenues of learning to pursue.

One of the challenges related to the health of the salmon brought us to the river's shoreline. We were invited to participate in a shoreline restoration project taking place in a community park.

That experience connected the students with the natural and built community showing directly how one affects the other. The students learned how the shoreline is critical for creating the right conditions for salmon to survive and thrive in the river, and how the park with mowed grass to the river′s edge was negatively impacting the river. The students could see how the muddy water here was different from the clear water where we had stocked salmon earlier. Replanting native trees and shrubs was a perfect link with biodiversity and a community action project.

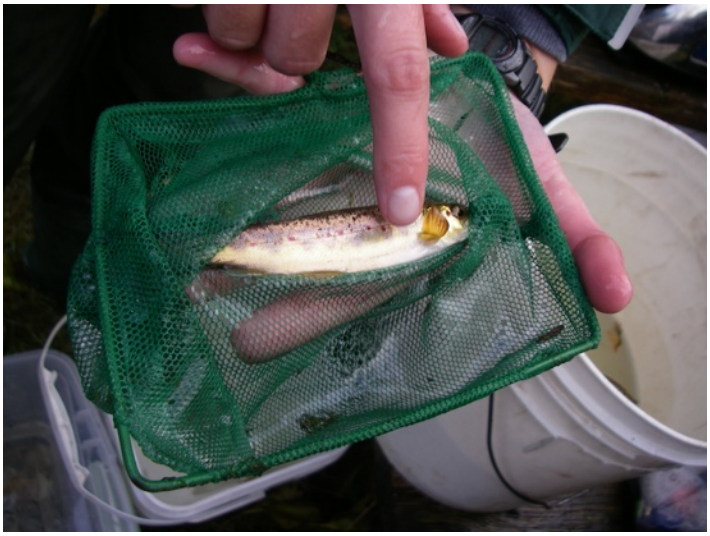
Further from the river but still connected with the watershed, our students have been out fungus finding and learning about this kingdom's key role in the overall health of the ecosystem. We have also built and monitored Wood Duck nesting boxes. We make regular hikes to the woodlands surrounding the river to connect through poetry, art, music and drama with the space surrounding our school.

As with any non-traditional approach to teaching and learning, there are challenges in both perception and reality. Parents and colleagues need to be educated about the curricular connections inherent in the outdoor experiences. Student safety is a huge challenge, which is overcome in large part by the students being engaged and interested in the experience. They are risk aware before and during the activity. The students themselves have proven over the years that they are responsible for handling these real world activities with seriousness and maturity. In general, they approach the river as a place to study, enjoy and reflect on and not as a play space. Beyond the students, the great allies to this approach have been parents in our community who have embraced the outdoor experiences as a key component of their children′s learning. Our partners in this ECO focus project at Learning for a Sustainable Future have brought the research and ministerial documents to support the 'different' teaching and learning found at Belfountain.

Having the opportunity to connect students with the immediate area around them is natural. There is an incredibly rich learning opportunity just outside the doors of each school and, in my case, it is the Credit River watershed. The real world and hands-on opportunities afforded to my students result in incredible student engagement during the activity and in the related curricular projects. The Grade Sixes have a real understanding of and interest in preserving the biodiversity of the watershed. The students have become active community citizens who demonstrate their interest and voice through both attitude and action projects. Hearing the staff of the Ministry of Natural Resources and the Ontario Federation of Anglers and Hunters say that they wish school had been like this when they were kids further affirms that we are taking the right approach in getting outside.

Bryan Bibby-Smith teaches Grade 6 at Belfountain Public School in Caledon, Ontario. He recently shared his school's "Get Outside" approach with teachers in the Dominican Republic through a project with Learning for a Sustainable Future. Bryan also enjoys gardening with his family, watching his daughters play their new favourite sport rugby and running on the trails around Fergus with his dogs.

Electrofishing is a method of measuring fish diversity. Ontario Ministry of Natural Resources staff lead students in the process of collecting, identifying and measuring fish before they are returned safely to the river. Below is an Atlantic Salmon caught using this method.



"Mr. D., that was the best science class I've ever had!"

The trials and successes of a classroom without walls

By Greg Derbyshire

The above feedback, made by a grade 8 student, is one of many similar comments made to me by students and parents who recognize and appreciate the opportunities provided by outdoor experiential education. That's why I took students outdoors when I was a classroom teacher. Not for the accolades or ego stroking, but for the knowledge that I reached many students in a way that can't be done inside the walls of a classroom.

Few of us need to be informed of screen-time statistics when it comes to our modern society. A growing body of research is supporting what many of us know inherently, and the long-term impacts of the loss of exposure to the natural world are mounting. We now know that connecting with the natural world benefits many aspects of our being. Physical, social, spiritual, and mental health improve when we spend more time outdoors. Bullying decreases, ADHD symptoms are reduced, and social and cultural barriers diminish. For many of us, we know that we have an obligation as teachers to expose our students to the outdoors; it may be the only opportunity many of them get.

Herding Cats

The last class of my indoor teaching career was one of the nicest groups of grade 7 and 8s I'd had the pleasure of working with. They were energetic, creative, and enthusiastic. They weren't, however, good listeners. During the first couple of weeks of September, I tried to

help them develop better listening skills. The usual strategies didn't work; being late for gym class bothered them, but didn't change their attentiveness.

With some trepidation then, I prepared them for a study of our schoolyard and the adjacent vacant land. The grade 7's would investigate biodiversity for the *Interactions in the Environment* science unit and the grade 8's would review the above, plus collect plant and water specimens for investigation with microscopes for the *Cells* unit.

Prior to going outdoors, we reviewed the expectations. Each small group would carry a clipboard, worksheets, scrap paper, pencils, measuring tapes or metre sticks and numerous zip-lock bags for collecting samples. Members of each group were to stay together and work together, solving problems on their own if possible.

I knew this class might be a bit challenging in an outdoor setting because of the struggles we'd had with listening skills in the classroom. But it was much worse than expected. Groups split up, metre sticks were used as swords, pencils got lost, and worksheets didn't get filled out properly. And, that was just in the schoolyard! With thirty years as a classroom teacher under my belt, and with considerable experience at outdoor education centres, leadership centres and summer camps over the previous thirty-five years, I had no idea a group could be so frustrating. Despite the schoolyard behaviour, we moved to the adjacent vacant land and continued our study.

When we finished our work and lined up at the school door to go back inside, I shared with them my dismay at their blatant disrespect for their peers, for me, and for the learning opportunity, which they had just spoiled. I told them that I had never had such a challenging group in all my years teaching outdoors, and that my experience that day was much like trying to herd cats. They knew I was upset, so they followed my instructions to return to class, sit down, open their reading books and remain silent.

I sat down at my desk to plan my lecture on respect and listening skills. After fifteen minutes, I asked for their attention. Instead of my lecture though, I instinctively asked them to share what was good and what wasn't so good about their outdoor learning experience. A few students offered the correct observations about poor listening skills and a general lack of following instructions. A couple of students suggested that the hands-on learning was a lot of fun. Then, the comment I'll never forget: "Mr. D. – that was the best science class I've ever had!"

I paused. It was obvious that many other students felt the same. "Why then," I asked, "were you so out of control out there?" It took some time, but some students shared that they seldom, if ever, went outdoors for anything but recess and gym class. They just couldn't control themselves with the perceived freedom; it was too much like recess, despite having clipboards and worksheets in hand.

Even with this frustrating outing, the learning that followed was substantial. We spent many quality hours preparing plants for pressing, identifying species, mapping study plots with species variety, comparing schoolyard plots with vacant land plots, preparing slides for looking at samples through microscopes, identifying microscopic invertebrates, and preparing reports for presentation. Just one afternoon of outdoor learning provided plenty of extended learning opportunities in the classroom, and set up anticipation for future forays into outdoor experiential education.

In fact, the outdoors became our classroom without walls. Students began to ask if we could go outside to learn. We did. Over the course of the year, we left the classroom for language, math, history, geography, science, physical and health education, and the arts. The outdoors became a natural place to learn. And they became better learners as a result.

Benefits, Barriers, Basics and Beyond

As suggested above, there are dozens of benefits to outdoor experiential education. Students get more exercise, they socialize more, co-operate more and learn more. They are exposed to new venues for learning where staff can share their expertise. Some students, who might find desk learning a bit of a struggle, shine in the outdoors; they often take leadership roles in groups – something they would not normally do inside. In my experience, students become motivated to work well together so that they don't lose their outdoor learning opportunities.

The different venues open up different ways of learning. Most will know of Howard Gardner's theory of multiple intelligences, (*Frames of Mind: The Theory of Multiple Intelligences, 1993*). There are now nine recognized intelligences: logical-mathematical, spatial, linguistic, bodily-kinaesthetic, musical, interpersonal, intrapersonal, naturalistic and existential. I am convinced that outdoor experiential education can support and enhance all nine intelligences.

Recently in education, *differentiated instruction* has been touted as the way to reach more of our students. Take them outside, then! Some will thrive. Some will be challenged. All should benefit in their own ways.

There are, however, a few barriers to taking classes out regularly. A single permission form for a year of local outdoor excursions may not be allowed at some schools. On the other hand, many schools and boards are moving toward being "paperless," so trip-specific permission forms could easily be completed electronically. Depending on administration, specific school and classroom compositions, the availability of volunteers may be a barrier. None are typically needed if you are staying on school property, and possibly if you are going "next door." Other outdoor resources within walking distances would require volunteers. Individual schools and boards will have their specific requirements.

As is suggested by my "*herding cats"* experience, individual class dynamics will impact on the quantity and quality of outdoor experiences. Teachers must recognize the uniqueness of each class and the individuals within it, and plan accordingly. The reality is, some classes may not be able to get out as often as others. Regardless, the benefits of outdoor excursions will be palpable.

Whether you're a novice outdoor educator who needs support, or the experienced teacher who can provide that support, there are a few basics to keep in mind. The list below is a starting point. Adjust it as you see fit for each activity to suit your specific needs. The more experience you get at this, the easier it is.

- Get to know your local resources, (schoolyard, woodlots, vacant land, urban studies opportunities, talented parents or other adults in the community who might be able to help you with specific aspects of outdoor learning).
- Get to know your board and school policies and procedures for outdoor

excursions; complete any required paperwork. Perhaps a generic permission form for *occasional excursions close to school* would suffice for those outdoor teaching opportunities that present themselves throughout the year.
- Arrange for volunteers, if needed.
- Know your students; what are their strengths and limitations?
- Plan the activity for your chosen curriculum area and topic, and gather materials and supplies.
- Carry out that plan; take those kids outside!
- Debrief the students to find out what they liked and didn't like, and what they understood and didn't understand. This feedback will prove very useful for future outings.
- Do follow-up activities to solidify learning.

Beyond the basics, here are some ideas for developing a network of outdoor educators within your school and district.

- Consult with colleagues to learn the basics.
- Share your ideas and experiences at regular meetings.
- Create outdoor activity resource documents specific to your schoolyard and local resources, (saved on your school's server, of course). All teachers can contribute to it.
- Combine classes for some of your excursions. This is one way to team up experienced and inexperienced teachers, and more appropriate student groupings may be easier to arrange.
- Be an advocate for outdoor experiential education whenever you can.

So, why bother?

From my years of experience in the outdoor education and recreation sectors, I've seen what a difference going outdoors can make. Beyond all the wonderful benefits stated in research, there's something that happens to children when they spend time outdoors. Their eyes soften. They begin to see the world in a different way. They're more centred and at peace. They discover a part of themselves they didn't previously know. What more could you want for your students?

The bottom line is, if you don't make the small effort to take your kids outside, who will?

Greg Derbyshire is a recently retired classroom teacher with the Grand Erie District School Board. His many and varied outdoor interests and pursuits continue to occupy much of his time. More recently, his interest in promoting the benefits of outdoor experiential education has inspired the creation of a new venture, It All Comes Naturally.

Unexpected finds (in this case, a painted turtle) are often a highlight.
Bring a pump soap for cleaning hands after such cool encounters.

Greening our Habits of Heart and Mind

An independent school's mission is reflected in its garden.

By Alison Elliott

How can an animal look like that THAT!
It looks like a jewel!
How is it going to turn into a butterfly?

I have heard animated comments like these many times over my years running an outdoor classroom program at Trinity College School (TCS). I started the program in 2005 in our Junior School for Grades 5 to 8. What began as a plan to naturalize our schoolyard evolved into a year-round program. Our school's mission is "Developing habits of the heart and mind for a life of purpose and service." The outdoor classroom program greens these habits by building environmental knowledge, attitudes, and action.

How I Got Here

When I was growing up, my outdoor classroom was my backyard. My mom mowed paths through the meadows on our 25-acre property so my sister and I could run through them. In her vast vegetable garden, I had my own row, choosing my own seeds and plants from age four. We had bird feeders on all sides of our house and, even as an aloof teenager, I would still run to look at the flocks of Evening Grosbeaks that stormed our feeders each winter.

As a young adult, I was being groomed to be a research scientist in my undergrad program and thought the next step was a Master's program. After turning down two programs because they just didn't feel right, I figured out that what I needed was to combine my skills in biology with people. I needed to be a teacher. Years later, my mom gave me a story I had written in Grade 2, all about how I wanted to be teacher when I grew up.

Following my B.Ed., I had four fabulous years teaching outdoor education at the Ganaraska Forest Centre. It was a subsequent chance encounter on a local street that led me to an interview to teach science at TCS. My first visit to the school included teaching a 40-minute class. The students were so excited when I brought out owl pellets to dissect … I think the Head of the Junior School wanted to hire me on the spot. In the interview, the topic of outdoor classrooms arose and I pledged to create one for the school if I was hired.

Getting Started

What struck me the most about the outdoor classroom was the final outcome. …
It is special to see such a successful outcome after planning so much and being able to see the process and what the area looked like before it all came together.

Elizabeth, Third Year University, reflecting back to the year we built the outdoor classroom

The schoolyard was utterly flat with some trees that formed a few hedgerows, but little diversity of colour, texture, species, or topography. What to do? There were so many possibilities and the freedom to take it where I wanted. What would a TCS outdoor classroom be? Attacking a challenge like this meant going straight to the Evergreen Foundation website. Their School Ground Greening program gave me the resources I

needed to go through a comprehensive visioning and planning process that included all our stakeholders.

In the fall of 2005, I launched the outdoor classroom concept at TCS. Assemblies, newsletter articles, surveys of the students, parents, and teachers, and research-focused classes built a huge amount of excitement around the idea. Students requested everything from chickens to butterfly gardens, a hot tub to a paint ball area. Parents came forward with offers of in-kind or financial help. Teachers shared ideas of how to use the space. The most popular and "do-able" items were water garden, maze, flower and vegetable gardens, benches, and a hill. Each class would have its own garden with a unique theme and plants suited to the sun, soil, and season.

Designing the Space

There are so many important things about the outdoor classroom, but maybe the simplest … is that it provides an excellent opportunity for a class to help create something beautiful that isn't being marked or judged or forced.

Cal, Grade 12, remembering his four years in outdoor classroom

Inspired by native plant guru Lorraine Johnson, I was committed to growing as many native species and perennials as possible. Using the Canadian Wildlife Federation's searchable plant database, each student chose three plants that matched the sun and soil for their class garden. From there, we created colour-coded maps noting plant height and flowering season.

Figure 1. Student-designed Gardens

Class	Garden Design	Special Features
Grade 5	Rainbow Garden	This garden was started 40 years previously by then principal, Sir Charles Tottenham. The class wanted to resurrect it and add flowers in all colours of the rainbow.
Grade 6	Vegetable Garden	As part of their astronomy unit, this class grows tomatoes from the University of Guelph / Canadian Space Agency Tomatosphere project. They built the raised beds themselves and the soil was augmented with compost made from pre-consumer waste in the School's kitchen.
Grade 7 East	Butterfly Garden	The class designed this garden in the shape of a bear paw for our School's mascot. Five trees to support butterfly larva were planted to represent the bear's claws. A T-shaped path was installed for Trinity.
Grade 7 West	Wildlife Garden	This garden was designed in the shape of an arch and shrubs were included to provide shelter and food for wildlife in addition to the various perennials.
Grade 8 East & West	Water Garden	Two classes worked together to dig the hole, build a ledge, lay in the rubber liner, place flagstones around the kidney shaped feature and install floating, emergent, and submergent plants. The first frog appeared the day after the water went in.

Amalgamating all the designs with extensive measurements for the area, we created a master plan. An architect friend of the school drew it up for us. Half of the area would be left for active play – running, soccer, football, etc. One quarter of the area would be developed as the nature area with gardens, benches, and the hill. The last quarter would have a play climber and swings installed with tree plantings around the perimeter.

The Launch

We will win this battle to save species and environments when we forge an emotional bond between ourselves and nature. When we love something we will fight to save it.

Stephen Jay Gould

As I read this quotation to the excited students, parents, teachers, and other supporters gathered on Earth Day 2006 for our formal launch, we all knew in our hearts that this was it: connecting youth to nature will change how they feel, know, and act towards our environment.

Students from each class were so proud to make speeches sharing their contributions to the ecosystem. Every student had invested in this dream. Although April showers threatened, the concert band performed, poetry inspired us, and everyone enjoyed touring the roughed out garden areas, the ceremonial tree plantings, and eating some good old-fashioned white cake adorned with icing trees and gardens. They all wanted to start digging immediately.

Family Planting Day

A great memory I have from the outdoor classroom was when it was first being made and my whole family came in on a weekend to help create the Grade 5 garden. It was a blast and it was really cool knowing that both my sisters would help take care of it as they made their way through the School.

Cal, Grade 12, reminiscing about Grade 5

With less than two months left in the school year, I was worried that all the garden prep and planting wouldn't get done before exams started. We needed extra help. Parent volunteers came out of the woodwork and helped round up all the needed perennials and trees at the local ecology garden and two tree nurseries. Late in May, fifty parents, students and teachers came to school on a Saturday for Family Planting Day. In teams, families were assigned a garden, given its design map and got to work planting all the associated plants. Our dreams were coming to fruition.

Watching it Grow

Observing students watch their gardens come alive is wonderful. The first time someone discovers caterpillars in the violets, the first tomato flower to appear, the first frog in the pond can be a magical experience.

As the summer approaches each year, the students who steward the native plants are confident leaving their gardens for two months knowing the species are well suited to the rain and soil of the area. The students who care for the vegetable garden appreciate the help of the volunteer maintenance program of watering and weeding.

Building Tradition

We give you this bouquet of flowers from the garden to brighten up your classroom. We give you this trowel to help you continue the tradition of improving wildlife habitat on our campus.

Michael and Natalie, First Year University, read this speech in Grade 8 during the Giving of the Gardens Ceremony

White-gloved treatment

After all the work of the first year, it hit me: how were we going to maintain this energy and sense of stewardship? What would happen to the water garden now that the Grade 8s had moved on to high school? What about the new Grade 5s who had just entered the School? They don't have a connection to any of it.

The teachers put their heads together and the "Giving of the Gardens" ceremony was born. Each September the whole school gathers in our outdoor "amphitheatre." Through speeches, story telling, and poetry, we re-count the history and vision of the outdoor classroom. Representatives from each class pass on symbols of their garden to students from the in-coming class.

Throughout the year, each class has set activities in their garden to build their sense of stewardship. Raking leaves for mulch, planting seeds, bulbs, perennials, and shrubs, and harvesting flowers and dried leaves for bouquets and artwork are just some of the traditions. The Grade 6s turn their annual harvest of tomatoes into salsa each fall. In years of bumper crops, we've been able to donate to a local food bank as well.

Getting out There

Outdoor classroom is fun because we get to learn about nature in nature. But, what I really enjoy is the freedom and the joy.

Matt, Grade 7, wrote this piece sitting in the snow this past winter

After two years building and nurturing the space of our outdoor classroom, we needed a system to ensure we'd get out there consistently. We needed a program, not just a place.

Finding time was the first issue. It was going to have to come out of my allotted science class schedule. Phase Two of our outdoor classroom was born: each class got one 40-minute lesson per eight-day cycle totalling 12 hours per year. The students loved it! Being out there so often meant they were fully connected to the cycles of nature occurring around them. There was constant excitement about what they were going to experience next time we were outside. Would they find another robin's egg like last week or would the toad tadpoles have hatched yet?

We were in the heyday of the program, but both the students and I wanted more. The students wanted more time to explore. I wanted to stop rushing them all the time. I felt as though I was cutting off games or ignoring teachable moments when it was time to go in for their next subject. Because each class was so short by the time we got out there, the students were often not dressing properly for the weather. Shivering distraction and fear of dirt on their uniforms were often dampening whatever fun I had planned.

Enter Phase Three of the outdoor classroom: four 75-minute lessons per season. The lessons occur over a two-week block, and total approximately 50 hours of outdoor learning if a student attends all four years in our Junior School. We've also been fortunate to have two additional science teachers join the program, bringing new ideas and energy. It's been really helpful to brainstorm as a group and share knowledge.

Phase Four of the outdoor classroom is on the horizon. As our Junior School investigates alternative class scheduling models, we plan to engage more teachers in the outdoor classroom and increase class time for authentic, cross-curricular learning in the outdoors.

The Program

I love playing the survival game. It gives you a sense of how real animals live. It's also really fun. I love feeding the birds and refilling the bird feeders. I like to plant in our garden. It's fun because we get to pick what to plant and take care of.

Taylor, Grade 10, wrote this piece in Grade 7

Currently, within each seasonal program theme, there are four separate classes. One class focuses on stewardship, one on exploration and observation, one on skills, and one on beauty and connection to nature. We use a potpourri of outdoor and environmental education philosophies from the old-timers like Steve van Matre, Joseph Cornell and Project Wild to new folks like Jon Young and Richard Louv.

"... fear of dirt on their uniforms"?

Figure 2. Program Themes by Term

	Autumn	Winter	Spring
Grade 5	Connecting With Nature	Exploring the Beauty of Nature	Springtime Outdoors
Grade 6	Biodiversity	Adapting to Winter	Plants & Vegetable Gardening
Grade 7	Ecosystems	Survival Skills	Connecting more Deeply with Nature
Grade 8	Water	n/a	Synthesis of Learning

Routines are really important to the success of our program. All of our classes start the same way. The students go get changed, pick up their assigned backpack, and then meet the teacher at the picnic table in the main outdoor classroom area.

We always check the temperature and look at the sky and surrounding vegetation. What has changed? Then, we venture out for the program of the day.

I truly believe that incredible learning can occur without any fancy supplies or gadgets. In fact, most of our learning tools are homemade. But, we have also been blessed to receive many donations. We keep a tool shed stocked with gardening implements so that we can easily work in our gardens. We also made up a class set of backpacks each containing a clipboard, pencils, magnifying glass, binoculars, and a sit-upon made of cut-up foam camping pads.

Reflection

I love the solo sits. I like being outside and learning about the world around us. I learned that everything has a job in the environment, even the little things. Everything in nature connects with everything else.

Zed, Grade 10, wrote this piece in Grade 7

It's easy to feel that a program like this is working well because the students are so happy when they return inside. But, we regularly ask ourselves if it's for the right reason. What are they actually learning? Is this meeting our goals? Are they developing the knowledge, skills, and values to take action on environmental issues in the future? Are they improving their own wellness through their experiences?

Besides having teacher meetings to assess the program, we do informal surveying of the students at times. The greatest sign of the effectiveness of the program comes through reading student journal pieces. We've tried free journaling as well as targeted journaling. In general, most students write about specifics but some emerge with a sense of the big picture. We continue to discuss how to meet our many learning objectives.

Challenges

Once you take away the four walls of a traditional indoor classroom, all kinds of things happen. Ninety-nine percent of it is amazing and inspiring. But there are a few things that pose challenges.

The main issue we were warned about was vandalism. Strangely, we didn't get any for five years. Then, all of a sudden one summer, all the corn plants were pulled out and left to die beside the garden, the tomato frames were stolen, the weather station was smashed in and instruments taken, and our picnic table was smashed up and moved. The students were devastated and the teachers were mystified. Where did that come from? Now we chain things down and plant more vegetables than we need. Ultimately, the bulk of the people who wander through our campus enjoy the peacefulness of the area and leave it be.

For me, the biggest challenge is in dealing with the occasional resistance or disinterest in the program, and nature itself. A Grade 8 girl screaming repeatedly "this is SO disgusting" can really disrupt the feel of a lesson. Redirecting can often help. I once was able to convince a student that the toad I was holding wasn't nearly so "gross" if you looked closely at the stunning gold pigment around its eyes. Five minutes later, she was holding the toad.

It often takes making a personal connection to help a disinterested student. One fall, I was helping Grade 6 students make leaf collections but couldn't break the ice with a boy who wandered about aimlessly clutching a crushed handful of white pine needles. I finally got through to

him by appealing to his skill at identifying brands of cars. If he could identify hundreds of individual makes and models of cars, surely he could identify six of the tree species that are giving him air to breath. It worked. He produced an elaborate collage and soon was looking for new species to add to his collection.

Allies in Implementation

One of our parents phoned and she'd like to donate a minimum of a thousand dollars to the outdoor classroom in honour of her daughter's graduation.

Jennifer, Manager, TCS Parent Fund & Parent Relations

This program would never have got off the ground or continued as long as it has without the unwavering support of the Head of our Junior School. She hired me specifically to create this program for the School and the process never daunted her. She always makes time for the program and has encouraged all our teachers to get outside. She never worries about the learning being tied directly to the curriculum because she understands that the learning is invaluable regardless.

Our teachers are shameless cheerleaders for this program and none can ignore the authentic learning experience it provides. The outdoor classroom has encouraged other teachers to take their students outside for history, math, art and music. Our grounds staff have also been great supporters over the years, whether in keeping a wide berth around new trees when mowing or bringing us soil, fixing broken elements, and raking when there's too much for the students.

Our families have been enormously generous. In addition to the initial gifts of specific plants, tools, labour, and money, we have had some surprise gifts over the years. People have also been wonderful about donating their Canadian Tire money to help us replace tools and buy plants. Keeping a profile about the program on our school website and in our newsletters has kept it in the forefront of people's minds. Because we've been so fortunate in receiving wonderful donations, we don't apply for any grants.

Moving Forward

The program will undoubtedly continue to grow and change as the students do and as we learn more about how to teach them. I feel so lucky to be here sharing my love of the outdoors and I know my colleagues feel this way too.

The outdoor classroom has taught me that if everyone works toward a common goal, whether it be weeding a garden, or helping save the environment, it can be accomplished.

Senaya, Grade 12, reflecting back to her four years in outdoor classroom

Those are the words of a young woman whose habits of heart and mind are turning green.

Alison Elliott is a science teacher and environmental coordinator at Trinity College School in Port Hope, Ontario. Her favourite teaching days are the sunny, frigid ones of February with fresh snow covering the trees and silence enveloping the students on their solo sits.

The sweet taste of success

Making a Splash in Your Local Watershed

Inner City Grade 8 Classes Encounter a New Kind of Wild

By Pamela Depooter

Highland Creek, Scarborough, Ontario

There is nature just around the corner. You live in a local watershed. Tributaries are close by, maybe only a 20-minute walk from your classroom door. Have you discovered them?

Go there. Listen. Watch. Dig. Splash. Explore. Play. Get curious.

But how do I get a class of 32 wild inner city grade 8 kids out there without injury … and make sure they all come back?

Here is what works for me.

I have four rules and they have never failed me even with the toughest inner city kids that "no one wants to take anywhere."

- You must always be in sight of one of the adults.
- You must always be within hearing distance of one of the adults.
- If you hear three blasts on a whistle go directly to that whistle sound. This is a sound of distress. Someone may need our help or there may be an emergency.
- HAVE FUN, BE CURIOUS and EXPLORE!

NOTE: I am the only one who carries a whistle. All students should be close enough to get my attention by yelling. Believe it or not, they naturally stay close and the flow of movement on the hike takes on a natural progression guided by curiosity. The most challenging part is trying to get back to school on time!

The story of my local watershed:
Location: Highland Creek, Scarborough
Grade 8: all students – behavioural, ESL, LD, resource, HSP, students on the spectrum, EVERYONE
Number of Adults: 1:15 ratio if possible
Learning Topics: Erosion; run-off; human

impact on the shoreline; water flow; pollution; water quality

Story #1: The Rock

You never know what you will find if you take a morning, afternoon or entire day outing to a local watershed. My first outing with Grade 8 inner city kids had us return with a big, flat, 20-pound rock. Why a rock? What learning could have possibly taken place with a rock? Keep reading and you decide.

After leaving the school, walking down a road, finding an entry point to the watershed area and entering the trees, students were in an unknown world. This seven-minute walk had them surrounded by trees, an experience that was a first for many. There were many places to stop and talk about our surroundings. What did we see? What was changing? What did we hear? We kept walking through the trees, down a steep hill and we magically (this, of course, was planned) came out of the forest onto the rocky shoreline of Highland Creek. The rocks, to my students, were truly amazing.

To me: *"Ms. D! Look at how flat this rock is!"*
To each other: *"Let's keep it! We can all sign our names on it and bring it back to class!"*

I could have demanded that they leave the rock behind, but I didn't. The rock was found in the morning. We were going to be exploring and hiking all day. Here is what happened:

Tough boys carried the rock.
Pretty girls carried the rock.
Gamers carried the rock.
Bullies carried the rock.
Victims carried the rock.
Nerds carried the rock.
Gangsters carried the rock.
Dummies carried the rock.
Athletes carried the rock.
Wimps carried the rock.
Students took turns carrying the rock.

All day through the water, along the shoreline, watching over it during lunch and carrying it back through the forest, up the ravine hill and into our classroom. Every student on the trip signed the rock. The rock sat on a desk in the classroom and even attended graduation. The rock is still the topic of banter between that class of students and myself over Twitter and Facebook. Today, the rock sits on my desk as a reminder to me that every student needs to go outside because they come back with a shared experience, a desire to return outdoors and a memory that will take them there.

And the water study? It happened. But the memory will always be that rock. In the minds of those students who are now in their 20s, that rock will likely get bigger, flatter and heavier. They will have walked miles and miles carrying that rock, but the memory of "The Rock" will hopefully be the spark that makes them return to the outdoors.

Story #2: Going with the Flow

Sometimes you get lucky. Experience nature when it happens, they say, even if that means putting the original learning goals on the back burner.

By luck, on year three, our fall outing to Highland Creek happened when the salmon were spawning. There was a ripple in the water …

"What is that?"
"There it is again!"
"It's a fish!"
"There's another one!"
"Look at them all!"
"They're huge!"
"What kind are they?"
"How big do they get?"

"How long do they live?"
"Where are they going?"
"What are they doing?"
"Eggs! They're laying eggs? Can we find some?"
"What happens after they lay their eggs?"
"Look I found a dead one! Why is it dead?"

You can imagine the excitement and energy these fish brought to the 60 plus grade 8 inner city students on the shoreline. The only activity that we did for the entire day was to watch the salmon, stand in the water with the salmon and experience the majestic salmon as they swam upstream.

What great questions! So many of these questions were a perfect lead into our water study. But, what about my original learning goals of the day? Erosion. Sure, it was there. Water run-off. Yep, great examples of run-off. Human impact on water flow. For sure there was evidence. But, those goals took a back seat to an experience that these students may never encounter again.

What happened next? In class, we learned about different types of salmon. We studied the effects that run-off, human-built water barriers, water quality, and erosion have on salmon. We looked at the geographic map covered by the salmon spawning at Highland Creek. Those salmon inspired three weeks of water study where students were so engaged because they had an experience to connect them with the topics in class.

Talk about going with the flow.

Pamela Depooter currently teaches Grade 8 Math and Science at Annette Street Public School in west Toronto for the Toronto District School Board. She maintains her outdoor interests by spending most weekends outside climbing, camping, taking photos, mountaineering and hiking.

Above: Black-nosed Dace

Right: Salmon Eggs

Spawning Chinook, Highland Creek

(Spur-of-the-moment opportunities like this are wonderful ... a caution on bare feet.)

Banding Buntings

A New Liskeard Grade 7/8 class participates in real world science.

By Joanne Goddard

"Just recently our grade 7&8 class experienced a one-of-a-kind outdoor field trip that was literally just across the highway and lasted from February 22nd to March 6th. AND, BEST OF ALL, we were the only class in all of Canada who were able to do it! One snowy morning in mid-February, our teacher Mrs. Goddard said to the class, "We are going to be banding Snow Buntings. We are going to participate in a study of the migration habits and population of Snow Buntings."

My first thought was, "When can we start!"

This is how one of my grade 8 students began his article about a project that got him out of the school and into the fresh air.

Grade 8 Citizen Scientists, aka Bird Brains

A year ago, I attended the Ontario Bird Banding Association Conference at Long Point Bird Observatory on the shores of Lake Erie in Port Rowan, Ontario. I was with fellow bird bander, outdoor educator, and partner Bruce Murphy or, as he is more famously referred to, "Murph." It was there that I learned about the concern over the snow bunting population. Apparently their 64% decline in numbers had caught the attention of researchers and a study of wintering flocks was introduced across the country. As I listened to the presenter, I could not help but let my mind wander to Kern's Public School, the small Northern Ontario rural school that I had grown so fond of over the past six months. It is located about 20

km north of Temiskaming Shores and tucked between several neighbouring farms. What a refreshing change it was to be teaching in a school where I was greeted every morning by the baying of sheep across the road and the earthy smell of farmland in the air. It was here that I was teaching a group of intermediate students the traditional reading, writing, and arithmetic, as I got my bearings in a new school community. As the Port Rowan presentation progressed, I realized that my students were in a perfect location to get involved with this snow bunting project. If we could just attract snow buntings to the fields near the school then maybe …

By the end of the weekend, I had a fair understanding of the goals of the Snow Bunting study and, after talking things over with Murph, I was confident that involving my students was possible. My first job was to sell the idea. Hmm, how could getting outside to observe a species in its natural habitat, the collection of data, the recording of observations in journals, questioning, hypothesizing, the calculation and graphing of results, and networking with other researchers across the country be worthy of taking up valuable school time? It seemed like a no-brainer to me. It wasn't long before Kern's Public School was "For the Birds!"

During the first few days of the project in late February, we put cracked corn (feed corn that is dried and split) in small piles on the now snow-covered, harvested grain field near the school. We then excitedly watched as the first birds arrived. We recorded temperatures and made observations about other weather conditions, bird behaviours, and anything else we considered of interest in our classroom journal. After a few days, we felt the flock was large enough and was committed to feeding at our site. We were ready for the next step. One of my students noted:

> *"Finally on February 22nd we got to band the birds! We set the corn-filled traps off the road about fifty metres or so out into Wayne Cook's field and waited. We must have seen 300-400 birds in the flock that first day of setting the traps! We knew right then, we were going to band a lot of birds."*

This isn't my best side, you know.

Daily, the students would set the traps, then watch as the birds entered and happily ate corn until they were retrieved to be banded. On the leg of each Snow bunting was placed a little numbered band. Its age, sex, and measurement information were recorded and later sent to Bird Studies Canada to be used by researchers. I could see that as the students worked, they were developing a real sense of authenticity. They began to see that their efforts would be used to direct future conservation efforts for the Snow Bunting species.

Nice bracelet! Where can I get one?

As one of my students was trudging out of the door on his way to the banding site, I overheard a student from another class ask him, "*So, are you going to see the birds?"*

To which he promptly replied, *"We are not going to see the birds, we are going to experience the birds!"*

The excitement about the project spread quickly throughout the school. Research projects were being done to teach the younger students about the snow bunting species and the primary students were writing about what the "big kids" were doing and drawing pictures of the birds brought for them to see up close. It was glorious to see my students holding birds and showing the primary children how to tell if the bunting was a "boy-bird or a girl-bird" and how old it was.

As the kids became more involved, their abilities to make scientific observations and conclusions became keener.

Today was our best banding day ever! When looking back at our banding data, we noticed that when the weather was mild and warm, the birds chose not to eat as aggressively, but when it was cold, windy and snowy, the bird count went through the roof! We thought this was a cool scientific discovery for a bunch of newcomer scientists! As it turned out, today was perfect for the birds. We banded eighty-three Snow buntings!

Unfortunately spring arrived early in Northern Ontario last year. In the end, our class managed to band two hundred and fifty four Snow Buntings, and thirty nine Lapland Longspurs (another migrating bird that sometimes travels with snow buntings). We were probably the only class in the area sad to see the snow melt but, alas, every winter becomes spring. We were so happy to be part of this project; it made us feel important, but most of all it made our learning fun!

Now it is a full year later, and we are wrapping up another banding season. This year we are happy to have included some of our Grade 6 students in the project.

Students anxiously watched for the arrival of the "Little snow birds" and they didn't disappoint us. With the snow, came the birds! With the knowledge and experience gained last year, the Grade 7 students, now Grade 8s, took on the leadership role of relaying their skills to the newcomers. This year, they set higher goals for themselves. Their hopes were to see the return of last year's banded birds to our site, perhaps have one of our birds show up in Greenland (part of the snow bunting's breeding range), beat last year's banding totals, and play a more active role communicating with other banding sites across the country. The students took a greater ownership of their learning and were more self-directed in where they wanted their project to go.

Some students gave up their weekends to band, some blogged with other banders about our successes and struggles, others created art, and one student even designed

a t-shirt that we had printed up for our whole class. The program provided an opportunity for every student regardless of academic ability to shine. There was a job for everyone from feeding birds to recording data, keeping journal entries, writing articles, making media productions and even learning to band. We are now collating our data and are proud to report that we have reached many of our goals. We managed to band 900 snow buntings, shattering last year's totals. We also re-trapped several of our returning birds from last year and caught birds from other banding sites around the province. Researchers will use this information to analyze the migration and wintering movement patterns of Snow buntings.

We are now excited about our next project which is putting up and monitoring tree swallow boxes in the area around the school.

I feel so fortunate to have had the support of my principal Sharon Bowes. I am also grateful for District School Board Ontario North East; it supports outdoor education and a program called "Teaching Ecological Responsibility, Recreation, And Adventure" (TERRA) run by Bruce Murphy, who was instrumental in getting the snow bunting program up and running by providing us with traps and student volunteers. Finally, I am most thankful for a wonderful group of students who were willing to break out of the confines of the traditional classroom in order to embrace the possibility of a school without walls where the trees, earth and all living creatures can be our teachers.

In conclusion, I must make a wee confession about myself. I am almost embarrassed to admit to the readers what my closest friends and colleagues know about me. I hate being cold. In fact, I go to great lengths to avoid the typical Northern Ontario activities such as snowmobiling, ice fishing or even walking a few feet in the snow to climb into the hot tub so often occupied by the rest of my family. So, why would someone like me be so excited about banding snow buntings? I suppose it is because I feel lucky to share a piece of the province with a species as spectacular as the little snow bird.

Joanne Goddard has spent that last 14 years teaching all subject areas (except Music and French) to mostly intermediate level students. She particularly enjoys sharing her background in Visual Art. Joanne also enjoys banding birds with Murph at the Hilliardton Marsh, walking her dogs and hanging out with her three children.

Loading up with seed

Awaiting measurements and banding

Bunting retrieval

Wing measurements

Garlic Mustard Busters!

An entire school tackles an invasive species.

By Janice Haines

A gigantic mustard bust

When I think about getting kids outside, I think about working with organizations in my community that have the same objective. I approach an organization with a partnership idea in mind. My first question is "What can we do to help you achieve your goals?" In this case, the students had expressed an interest in developing an action plan to deal with Garlic Mustard in their community. This brought me to the Credit Valley Conservation Authority (CVC) invasive species co-ordinator who was very excited about the idea of getting the students at Belfountain School to go to their local Conservation Area every spring to help pull invasive species. This could be done in a consistent manner every year by the students and we could possibly eradicate an invasive species over a period of time. The discussion went to Garlic Mustard for three critical reasons: it is easy for all ages to pull, it is taking over the forest floor (the biodiversity of other plant species is threatened) and there is a significant amount of it in our local Conservation Area. All six of the teachers from Grade One to Grade Six joined in and used this situation as a learning opportunity for their students to absorb curriculum in a useful, hands on manner. The Grade Fours for example were able to focus on habitat and adaptations.

I decided that I wanted to know more about Garlic Mustard and began searching

the Internet. I found out some interesting things; not only is this plant very invasive, but it also is an herb that you can eat. I also learned about a festival in the US that was created so that they could raise awareness of this invasive species and eradicate it in a certain area.

Armed and ready, I had a meeting in the summer with all of the stakeholders at the Credit Valley Conservation Authority, the local Belfountain Community Organization, and Eat Local Caledon to discuss the possibility of a festival. I made it clear that the students would be making all of the decisions and would run all of the meetings. They liked the idea so I pitched it to the students.

Every year, the junior teachers offer cross-grade projects. Junior students are given a choice between three and select the project in which they have the most interest. I told the students that I was hoping to raise awareness of the invasive species Garlic Mustard. This could involve creating a festival as an idea and/or anything else they would like to do. I told them that they would make all of the decisions as a group and would decide on what their class time would look like in our weekly sessions.

A group of 20 students committed to the idea of creating a festival and we sat down in a circle and talked about how that might look. We talked about all of their ideas based on festivals that they had been to and then we went online to see what kinds of things other festivals offered. The students decided that the goal would be to have a Garlic Mustard pull contest and then celebrate afterwards with awards, local foods, local artists and music.

They were buzzing. They were so excited. I personally have never done anything like this in my life so when I asked the question, "So, how do we start?" I didn't have a clue where we would be going. I had faith that if we looked in the right places that we could figure it out together. Our first meeting together, we googled "How to Run a Festival." We found out that usually festivals had committees and the students decided that they liked the idea of focussing on something and then bringing ideas to the group to be voted on. I suggested that they all do most things as a class because this is how I would be able to mark them and cover the curriculum. They agreed. The students had also decided that the priority was establishing a logo and a slogan. They each created one and then one was chosen by the group. We became known as the "Garlic Mustard Busters! Find it, Pull it, Eat it!" The design was sent to a person at the school board who created an electronic version. When the students confirmed they liked the results, a local business printed it on Canadian-made organic hats and t-shirts. They believed that, although they were more expensive, it was important to buy Canadian and use organic materials.

When any decisions were made, they were taken to the general monthly meeting after school with the CVC, Belfountain Community Organization, and Eat Local Caledon. At these meetings, the students presented their ideas and asked for input and support if necessary. The next day, the students would bring the meeting minutes back to the group and things would be shared and then added or changed. The students saw me as the facilitator. They knew that they were in control and that this was their festival. If they needed advice or had questions they asked me. If I couldn't answer them or help them or point them in the right direction, they would email one of the other organizations or call someone who

would know. We didn't always agree on things but, unless safety was a concern, the final decision was theirs.

We had several opportunities to go outside over the course of the project. Our first priority was checking to see if we had Garlic Mustard on our school property. We were appalled to realize that we had some in our own backyard. This gave the students an opportunity to educate their school community about this plant and it seemed that, during every morning walk, a different student would bring in some Garlic Mustard to be disposed of. This also translated to home … and many parents complained of spending weekends on their properties searching out and disposing of the invasive plant with the prodding of their now very knowledgeable children.

We went to the Belfountain Conservation area to decide whether or not the space worked for the size of the festival we wanted. We measured the area and planned spaces for the vendors. We also went to the area with an expert from the CVC to learn about other species and significant natural features along the trail because one of the students wanted to lead a hike for festival attendees. We went to two different forests to look at the amount of Garlic Mustard, calculate the approximate number of garlic mustard pullers and decide on a pull site. We created videos about Garlic Mustard outside. Closer to the festival, the kids pulled Garlic Mustard so that it could be given to local chefs and parents who were creating dishes to taste and for the festival cooking contest.

The learning that the students were involved in was phenomenal. They wrote grant proposals and created budgets. They ran meetings and received input that they then shared with the class and made decisions around. They created activities. They worked with the CVC to create a poster and a website. They talked to local artists about creating prizes and to local musicians about performing at the event. They created timelines, put up posters, and talked to the regional government about having compost and recycling containers at the festival. They wanted the event to be local and eco-friendly. They had to make phone calls, put articles in the paper, talk to reporters and get everyone excited about the festival. They did everything they had to do in order to make it a successful day. They worked hard and were thrilled by their accomplishments. They felt empowered and felt like they made a difference — because THEY DID!

Listen to what the students said:

I knew the festival would be fun and challenging. I knew I would learn new things and become better at skills that we would use. I like to plan and organize so this was perfect. It was challenging to have everything done by a deadline, but when the festival day arrived I was happy and felt like I had done something great!

(Maghan, Grade Four)

When I first heard of the idea to create a festival based on removing an invasive species that was causing harm to our environment, I was all in. Questions swirled around in my mind like, "How long would this project take?" "Where would we get the funding from?" "Who else outside of the school would be willing to get involved?" and, "With just 20 kids, could we make this happen?" " I chose to become part of this festival idea for many reasons but mainly because I wanted to make a difference in the environment.

(Holly, Grade Five)

We went out into the community and had

to get vendors. We needed budgets and learned how to manage money properly. We had to work around problems that came up and we had a timeline and a due date that couldn't be changed. All of these things will help me in the future.

(Carly, Grade Five)

We didn't just plan this festival, we made it happen and we might just be kids who wanted to help but we put together a great festival and made a difference. Now everyone in our community knows how to stop garlic mustard and that they can cook it, stir it and eat it!

(Carly, Grade Five)

From the second I heard Ms. Haines' idea about planning a Garlic Mustard Festival in Belfountain, I along with so many other students wanted to be involved! The festival was all about helping the environment and educating others about invasive species. It was an amazing experience and although it was extremely fun, planning the festival was also a lot of hard work! We had to learn about budgeting, applying for grants, writing articles for newspapers and even filming trailers about Garlic Mustard. Since the festival was all about the environment, we wanted to make it completely eco friendly. In order to make sure that happened we used decomposable dishes, cutlery and yard waste bags (for the Garlic Mustard after the pull). Participating in the planning the Garlic Mustard festival has taught me so many skills that will stay with me through my entire life.

I learned about leadership, responsibility, being on time with deadlines, working together, and community building. I am so grateful that I was able to participate in the planning of the festival. It was an amazing opportunity and I will never forget it!

(Edi, Grade Six)

The festival was at the end of May last year. The students organized a bus to and from the pull, the parking, the vendors, activities for the day and monitored compost and recycling. They pulled 1200 pounds of Garlic Mustard and gave local pottery to the family who pulled the most and to the winner of the amateur cook-off. The goal was to raise awareness in their community and get people outside enjoying a local event. They achieved that goal!

After the event, the learning didn't stop. We met with the stakeholders and reflected on the event, followed up with grant money and the budget and celebrated with a walk to the local ice cream store.

This year, there was a discussion about a second annual event and I had 42 students that wanted to be involved even though I told them it was a lot of work and they had to make all of the decisions.

I love being the facilitator and watching the students take on and accomplish something that they will remember for the rest of their lives. My job is to ask questions and they supply the answers. This is now a part of who they are and they can be proud of that. These children have a voice and because they were given an opportunity to shine, hopefully this will carry on into their future and they will continue to be active, engaged citizens in their communities.

The students were given the Canadian Wildlife Habitat 2020 Youth Project Award for their initiative with the Garlic Mustard Festival.

Janice Haines is a Grade Four teacher at Belfountain Public School in Caledon for the Peel District School Board. When she is not with her two children, she loves volleyball, mountain biking and spending time with friends.

Get Outside! A Principal's Perspective

A principal reflects on how his school is preparing its students for the future.

By Tim Pedersen

How can we get students to build the skills needed for twenty-first century learning? Get Outside! In this article, I share with you five observations and strategies that we have used at Belfountain Public School to build collaboration, creativity, communication and critical thinking.

A little about us: Belfountain Public School is a Kindergarten through Grade Six school with approximately 175 students and 15 staff. We are located in Caledon, in close proximity to conservation areas and natural settings. While we are fortunate with our setting, I do believe these strategies can be developed at any school and location – they may be even more crucial for urban schools.

Build a common mission for your school:

This is a crucial element in creating a whole school approach. It takes time but it also focuses everyone on what we are trying to do for staff, students, and parents. Our school motto is "Get Outside;" we thus create multiple opportunities to take our students outside for their learning.

Our mission statement is as follows:
Our students, staff and community are committed to developing the whole child through authentic environmental learning using community-based opportunities and the natural environment for student achievement.

In the busy-ness of the school year and with so many different initiatives and opportunities out there, it is important to maintain a common vision for learning.

Use the natural setting that you have:

We are very fortunate to have a school setting that readily lends itself to outdoor learning. We have been able to set up two outdoor classrooms, one using large rocks for seating and the other using tree stumps and logs. These settings allow for circular meetings or knowledge building circles to take place where students and staff can sit together and share their learning, building on each other's experiences and impressions.

Our playground also allows for the students' creation of forts and villages made of sticks, stones, and hay/grasses. Skills in creativity, collaboration, negotiation and conflict resolution are developed in real-life and meaningful ways as the students enthusiastically engage in these free time undertakings.

And, our playground also allows for the whole school to start each day active and outdoors with Daily Physical Activity. In winter, even our Kindergarten students are able to snowshoe about the property and be active in their learning.

Build the capacity of staff and students:

We have worked at developing a collaborative approach to build the knowledge, skills and leadership of our staff and students. We want to provide them with opportunities not only to attend workshops and professional development opportunities but also to lead workshops and PD sessions to share their learning with other staff and students within the board, the province, and even with teachers in other countries. I believe these experiences are vital in helping staff and

students build a deeper understanding of what they are doing in their program and to be able to articulate that mission and vision to others. We have hosted other teachers, schools, and classes at Belfountain Public School with our students taking the lead in sharing their learning with others. As a school, we have participated in creating videos with the Learning for a Sustainable Future organization to be used as professional development for teachers around the province and the world. A video celebrating the work of Belfountain has even been shared at the United Nations. Staff and students have presented at workshops for The Council of Outdoor Educators of Ontario (COEO), the Ontario Society for Environmental Education (OSEE) and BEAN (Biodiversity Education and Awareness Network) as well as Ontario universities such as York, Lakehead and the Ontario Institute for Studies in Education (OISE) with the University of Toronto.

Develop integrated inquiry-based learning:

By having our students generate their own questions from real-life based outdoor experiences, they can see a purpose to the literacy and numeracy skills that they are expected to learn. Applying that learning through projects that make a difference in the communities where they live takes their education to a whole new level. Building on the content areas of Science and Social Studies and then looking to integrate literacy, numeracy, and the arts into these areas has provided rich opportunities for integration.

Last winter, all of our students from Kindergarten to Grade 6 studied the Underground Railway through picture books, articles, and biographies. Organized into family groups, the students subsequently experienced a simulation in the forest where they needed to move to different stations in order to safely get to Canada without being caught. Walking through deep snow, needing to be silent, and needing to navigate their way in the woods helped them to understand what it might have been like many years ago. Students then journalled about their experiences and shared their insights and learning within their classes.

Our Grade Three students have been working on Urban and Rural Communities. They have been getting outside to look at the characteristics of our rural setting and community and then documenting what it is like here in Belfountain through the use of iPads and other forms of technology. They have been blogging about their observations with schools in urban settings and comparing and contrasting what it is like to live in each of the locations. Reading, writing, technology, and social studies – both in and outdoors – have been a natural part of this learning.

Develop community partnerships:

When I arrived at Belfountain Public School this past January, I was amazed by the large number of mutually beneficial community partnerships it had established. My recommendation is that all schools find out what organizations and agencies are located in and around their area, and then take the time to start building similar relationships.

Here's a sampling of the Belfountain partnerships:

- Students and staff work with the local conservation areas to do an annual Garlic Mustard Pull, a community

festival to combat this invasive species in our area.
- Students and staff have been working with the Ministry of Natural Resources to do pond and stream studies as well as working with Ontario Streams to stock salmon in the Credit River.
- Our Grade Three students and staff have been working closely with the Caledon Horticultural Society in bi-weekly sessions focusing on soils and plants. Students and staff get outside into the gardens on a regular basis. They have also been working with the local community to tap maple trees and make their own maple syrup; this culminated with a great local celebration replete with pancakes and freshly-made syrup.
- Our Grade Four students have partnered with a local man, Steve the Squirrel Guy, to explore the habitats of flying squirrels. They have built nesting boxes for the squirrels and they monitored the boxes this spring.
- Our Grade Five students have been working with Journey North: Tulip Test Gardens where they have created tulip gardens and this spring have been monitoring their growth. More than 400 classrooms in the northern hemisphere planted Journey North test gardens this past fall. Each group followed the same protocol; 'Red Emperor' tulips planted according to specific guidelines. As the tulip plants emerge and bloom, the young scientists will report and track the greening of spring on our real-time maps.
- Students and staff have also built partnerships with the local community fairs. Students regularly enter exhibits and take part in various competitions.
- Our students are also planting beneficial wetland species in the local conservation areas.
- With the partnerships that have been created, the local conservation areas (Belfountain and Terra Cotta) have worked with our students and teachers to pilot outdoor games and other learning opportunities for students. They have gathered feedback and used it to improve and refine their activities before taking the programs out to other schools. These partnerships have benefited both the school community and the local organizations.

Getting your students and staff out of the traditional classroom and into the outdoors provides great learning opportunities to build twenty-first century skills. We have been able to deepen the learning for our students and build leadership skills for both students and staff. I would encourage others to take a first step into finding ways of getting outside.

Tim Pedersen is an elementary principal in the Peel District School Board. He was appointed principal at Belfountain Public School in January 2013 and is excited to continue the work of that has been started by the staff, students and community at Belfountain.

Earth Club Dreams Sow Seeds of Change

The leading role of a school's Green Club

By Suzanne Hamel

Photo by Brent Linton, The Chronicle Journal, October 5 , 2013

Once, in a beautiful, faraway land …
that was, somehow, not so very far …
a land where every stone was a teacher
and every breeze a language,
where every lake was a mirror
and every tree a ladder to the stars,
(Douglas Wood, Old Turtle and the Broken Truth*, 2003)*

Daring to Dream

I have a dream. Children and societies all over the world have access to learning opportunities that build healthy, peaceful and sustainable communities. This is what I refer to as critical environmental education, and it requires a widespread shift in our thinking and actions, even perhaps in our seeing and knowing, along with a diversity of approaches and skills. Until this becomes an overarching educational priority, it will too frequently be left to a handful of inspired parents, teachers or administrators. However, as an Assessor with Ontario EcoSchools, observing firsthand the growth of

environmental education in my region, and as I come across the growing related research, ideas, efforts and success stories both nationally and internationally, I find cause for hope. I shall focus here upon my own personal stories.

One Step at a Time

How can we live well in the cultural and ecological places that we inhabit?

This is an important question that continues to have evolving answers.

What changes are needed and what is our next step?

The answers can be both complicated and simple.

When left up to the children in our "Club de la Terre," the focus of our attention clearly became schoolyard greening. We simply asked, "If our club could change anything about this school, what would you change?" The students generated a giant list of ideas. We displayed them on posters around our library before voting with three assigned stickers per student. The results were clear. The students simply wanted, like most mammals on the planet, a healthy, safe and inviting habitat, or landscape, to 'be' in. The students no longer wanted a chain link fence with a busy road on the other side as their focus of distraction in the yard, or the backdrop to their playing (and learning). They wanted more trees, more plants, a bigger garden, some art inspired by our natural surroundings, and habitat that invites other species such as birds, bats and butterflies. They also wanted to 'be' outside more during their learning, and as part of their learning.

1) Schoolyard Greening: the shift towards an "outdoor learning space"

Our Club de la Terre inspired a proposal that was submitted to the administration of our school and school board, outlining our dreams to green the schoolyard. A parent and teacher volunteer created a PowerPoint presentation (the Evergreen Foundation website was helpful); it was presented to the staff and again to the parent/teacher council. The results were most encouraging: a long-range plan produced by a local landscape architect and the planting of six new trees. Furthermore, the chain link fence/busy street is now covered with eco-friendly and relatively inexpensive bamboo fencing. The fence also displays four large beautiful murals depicting the Lake Superior/Sleeping Giant in the cycles of the seasons and the day, painted by students and two local artists who volunteered to guide the process. We also added a chalkboard to create the opportunity for children to enjoy drawing during their recess and to create a space for teachers to use during outdoor lessons. A very small, forested area planted 12 years ago by a group of parents has now become accessible to students, with the trimming of low branches and the addition of small trails covered with mulch. Several parents volunteered along the way to help this phase become a reality. Since our language can influence so much of how we see our world, our Club de la Terre is promoting the idea that our schoolyard be referred to as our "outdoor learning space" since it is this, and so much more.

To inspire and raise comfort levels around outdoor environmental teaching and learning, the adults of our Club de la Terre offered to provide a workshop for the teachers and staff of the school during a PD day. The principal kindly supported the idea, and a half-day workshop was offered that included theory, an introduction to Ontario's environmental education policy, and outdoor activities

including an introduction to the Project Wild conservation education program.

2) Learning through Food and Garden

Our school now has three small raised gardens that provide rich learning experiences, especially for our Grade 3s. Last year, one teacher and two parents in our Garden Club (related to but separate from our Club de la Terre) took our gardening program to the next level when they tapped into a local program for funding and support through the Thunder Bay Red Cross entitled, "Healthy Eating Makes the Grade." The Grade 3 students selected their seeds based on what vegetables they wanted to grow (after having a taste test), and they participated in the entire growing process from seed to harvest. Families volunteered over the summer growing season to water and weed the gardens through a weekly sign-up. The project concluded with a feast that the Grade 3 graduates prepared the following September for the incoming Grade 3 class. This was a fabulous way to pass the torch, so to speak.

3) Making Local and Global Connections Beyond the School Walls

Our Club de la Terre learns about sustainable issues beyond our school walls by making connections to where our food, water, electricity and waste are managed. For the last two years, we did a campaign about local food, and encouraged our annual school outdoor BBQ committee to connect directly with local farmers who were raising meat ethically and sustainably. We placed colourful posters (pizza boxes) around the school about the local farms where our hotdogs, hamburgers and wheat used in the buns came from. We cut down on our carbon footprint by decreasing the distance our food had to travel. This also led to classes visiting a local farm using sustainable practices.

Making connections to the place in which we live, our Club de la Terre asked the question, "Where does our tap water come from?" With the support of our school principal, our club took a trip during school hours to the Bare Point Water Treatment Plant during World Water Week. The tour was free, and working with EcoSuperior, a local environmental non-governmental organization was helpful. The students shared what they learned through short class presentations, making posters above our water fountains (pictures of Lake Superior with a giant straw dipping in) and writing a short description for the school board's website. Many of our ideas and inspirations have come from other schools and NGOs, and especially while working towards being certified with

Ontario EcoSchools and browsing the best practices that they have gathered.

Connecting to local NGOs as well as national and global campaigns or celebrations like Earth Day or Earth Hour has inspired more outdoor experiences. For example, our Earth Day celebrations for April 22nd over the last couple of years have included up to a week full of events outdoors, including a garbage clean-up on the nearby creek at the mouth of Lake Superior, class chalk drawings (all over our school and surrounding pavement) of humans living well with other species, litter-free lunches, eco-art, and letters home encouraging active, non-motorized transportation. Other educational outings have included a full-day program with a local outdoor environmental educator in a municipal green space and visiting the Old Fort William Historical Site to learn about some of the cultural history of this region and 'place.'

Facing Limitations and Barriers

I am aware that the dream for more outdoor learning can be met with many disheartening barriers. Perhaps some of these limitations are within us – our fears (based on both real and perceived risks) and our lack of comfort with being in and knowing our natural and cultural surroundings. However, as educators, most of these can be overcome with increased experience, awareness and even training (e.g., courses in outdoor skills, first aid, natural and/or cultural history). They can also be overcome with perseverance.

1) Safety and Litigation

A common barrier to furthering our outdoor learning experiences is the fear of litigation and potential lack of student safety. This must be addressed by a thorough familiarity with the school board's expectations for risk management. This includes appropriate student/adult ratios, outdoor management (e.g., leads and sweeps; group sizes; the use of whistles and clear boundaries), required equipment (e.g., communication devices, first aid kits and epipens) and staff certifications. Another important layer is preparing for the weather. A fabulous online resource to further assist teachers in managing their class outdoors is *Into Nature: A Guide To Teaching in Nearby Nature*.

When leaving school property, this concern for risk management becomes even more apparent. While travelling by road is commonly accepted, statistics show that transportation poses the highest risk. A protocol in the event of a traffic accident should be in the hands of the teacher. Certain activities require extra precautions. Garbage clean-ups require everyone to know that an adult will handle and dispose of any recovered sharp items with the appropriate gear.

It is important to note, that we can never eliminate all risks and hazards, yet we continue to do our best, for the right reasons. As we constantly strive for student safety, I like to remember the following words from Grace Murray Hopper: "A ship in port is safe, but that's not what ships are built for."

2) Financial and/or Human Resources

Another limitation is the lack of financial and/or human resources. Being connected to your local area can really help here. I have found that once a good idea is in motion, there are often many parents and/or outside community members who are willing to volunteer their time to make it happen. With this extra help, there is a better chance of

tapping into funding resources for the expansion of outdoor and environmental learning. I also have learned that I don't need to be an expert when it comes to outdoor and environmental education, that the inquiry approach can be a powerful pedagogical approach to learning, as students and teachers become co-learners in the process (see www.naturalcuriosity.ca). Take the time to check what local agencies might have to offer. Your search should include community colleges and universities, provincial and municipal parks, nearby outdoor education centres, and local naturalists. You don't need to be the expert. They can be brought to your school or your school to them.

3) Negative Attitudes

It's too easy to become depressed about our future on this planet. Moving forward requires that we focus on the positive actions needed for change. This does not mean that we avoid identifying key problems that we are facing, only that the focus of our attention and language we use is generally about the good, the positive, and the better. It is about having a vision of a future that is beautiful and possible. It is about positive actions that inspire students and adults alike. The Earth needs more "solutionaries."

Our Future Steps

Our club and community have many more promising dreams. This summer, our school board plans to fund further improvements to our outdoor learning space (a.k.a. our schoolyard). Plans include a timber frame shelter for our outdoor classroom, the planting of more trees, rocks to climb on, a butterfly garden, an eco-friendly soccer field, and the installation of an outdoor tap to aid in watering our plants and trees. As a school, we hope to make more time to connect with our surroundings.

We also hope to offer more off-site field trips to nearby locations such as the following:

- Green spaces where we can learn more about our natural surroundings
- Sustainable farms that are growing vegetables and raising animals ethically
- Streams to raise awareness about all our connections to clean water
- The recycling plant and other waste diversion steps we can take on multiple levels. This includes consuming less.

In order to increase one's environmental literacy and sense of place, it is clear that more learning needs to take place outdoors. This begins with increasing the comfort of the teachers, students and administration. In our case, this means improving the outdoor learning space in our schoolyard by making it more inviting and learner-friendly. In addition to our new outdoor classroom (a timber-framed shelter is in the works), a talented local designer of outdoor gear from Ostrom Outdoors has created a portable and affordable outdoor classroom that teachers can easily carry whenever and wherever they want to teach outdoors. The kit is comprised of 40 light closed-cell foam pads stored in a duffle bag with extra pockets on each end for educational materials. This way, any teacher on a whim can use the outdoor classroom, and create any seating arrangement appropriate to their outdoor lesson, from reading or sharing a story aloud, to student presentations, or nature journaling, either on the school property or at a local green space.

We are also hoping for more time to be dedicated to training and idea sharing

amongst the teachers and staff during future PD Days and other learning opportunities.

I also hope that we continue to listen to the children. It is interesting to note that after celebrating National Tree Day this past fall, Grade One students were asked how they felt after walking and spending time in a small forested area in the corner of our outdoor learning space and they responded with: "happy," "peaceful," "alive," "joyful," "good," and my personal favourite, "like a champion." Such words inspire us to go even further.

Final Thoughts

I am convinced that valuable learning that guides us towards a sustainable and just world needs to take place outdoors as well as indoors. For me, it is about our relations to each other, and with the rest of this living, animate land in which we live. The walls of our current schools need to be more permeable, helping to guide all of us towards stronger relations with the place that surrounds us – experiencing firsthand the living landscape, which is undeniably and immeasurably beneficial. This is especially valuable for our growing children in this time of great distractions. Where to start? We don't have to look far. We can begin by listening to the voices of our children, our students, our own hearts, along with every stone and the language of the breeze …

Dare to dream!

Suzanne Hamel is a parent of two young children who attend École Catholique Franco Superieur on the north shore of Lake Superior. She volunteers with the school's green committee, otherwise known as "Le club de la Terre. She is also an educator and contract lecturer at Lakehead University in the fields of environmental and experiential education, outdoor leadership, and parks and protected areas.

I should ask that a gift to each child in the world be a sense of wonder so indestructible that it would last throughout life, as an unfailing antidote against the boredom and disenchantments of later years, the sterile preoccupation with things that are artificial … If a child is to keep his [her] inborn sense of wonder, he [she] needs the companionship of at least one adult who can share it, rediscovering with him [her] the joy, excitement and mystery of the world we live in.

(Rachel Carson, The Sense of Wonder*, 1965)*