Connections

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Photo by Alex Dunkley

The journal of the Global, Environmental & Outdoor Education Council

To promote involvement in quality environmental and outdoor education

About GEOEC

The Global, Environmental & Outdoor Education Council (GEOEC) is an interdisciplinary specialist council of the Alberta Teachers' Association. Our mission is to provide resources and venues for dialogue and networking, as well as to promote quality professional development for Alberta teachers in the area of global, environmental and outdoor education. Members receive current news items, teaching ideas, information about our workshop series and food for thought through our quarterly journal, *Connections.* We are also active on Facebook (www.facebook.com/geoecalberta) and Twitter (@GEOEC) with up-to-date information on PD opportunities and initiatives in Alberta.

> If, at some time in the future, I'm going to give power to someone to make decisions regarding the fate of the world, I want that person not only to have a knowledge of what nature (the outdoors) is, I want them to have an appreciation for it. I want that person to have seen the stars at night, not just a sodium glare reflected from city smog. I want that person to have walked beside a stream from which you can drink unfiltered water. I want that person to have listened to a forest in the wind and felt a paddle in their hand as he or she finished a stroke. I want that person to have walked across a mountain valley, rather than merely have driven through it or flown over it. I want it to be clear what needs to be protected—the real things that we are in danger of losing—rather than abstractions we've seen on a video screen. Not only is it important that learning be active, purposeful and social—if it isn't, you have to question whether learning is occurring at all. Like Thomas Dewey, I don't believe that education is preparation for life, it is life. And if education is life, one of the proper studies is what the environment is, how we relate to it and how we relate to the people with whom we share this planet. That's why I don't have a problem with the integration of three disciplines in one council, the GEOEC.
>
> —*Noel Jantzie*

This excerpt was taken from Noel Jantzie's editorial that previously appeared in Connections*, Volume 29, Number 2, Fall 2008, and is reprinted here with his permission.*

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CONTENTS

President's Message

As I type this message, I can't help but reflect on 2020/21. We educators all knew that the school year would be something we had never experienced before, bringing a new set of challenges to overcome. What we did not expect was the overwhelming interest in getting kids out to explore nature. Everyone wanted to take their students outside and capitalize on those safe spaces. Who would have thought that the Global, Environmental and Outdoor Education Council (GEOEC) could help lead the way in an online world!

With our online workshops, webinars, speaker series and conventions, GEOEC had a great year, despite all the challenges of the COVID-19 global pandemic. Hosting multiple events each month, our executive team worked extremely hard to provide a wide variety of experiences and opportunities for members across the province. We hope you were able to attend one or more of those events.

With a new school year on the horizon, we look forward to presenting at the Beginning Teachers' Conferences and the specialist council carousels for preservice teachers. Our Solstice Series will return this year. We are still working out the details to make the event as safe and as successful as possible for educators. This fall might look a lot different from last fall, but it is still hard to predict. We truly hope we can go back to hosting some in-person professional development opportunities, but if we can't, we will continue to dedicate ourselves to a strong online presence for educators across Alberta.

I also hope that this year environmental and outdoor educators can once again take kids on off-site experiences and field trips throughout the province. As you read this message, I hope that I myself am on a bus to the mountains for an adventure with my students. It was a strange year, not being able to take our students out of the city and go off exploring. That is not to say that we didn't have amazing days in our own backyards and city parks, taking advantage of every green space we could, but there is so much more in this world to see.

One thing I do know for sure is that no matter what this year throws at us, educators will continue to work hard to create memorable experiences, adventures and lessons within the constraints placed on us. We can all do this together, and we will continue to be the best teachers we can be for our students. It's who we are!

If your school division needs any form of PD, please get in touch with our executive team. We would love nothing more than to host an event in your area and provide support related to global, environmental and outdoor education. We also provide sessions at teachers' conventions, conferences and other PD events. Please keep up to date by following GEOEC on Twitter (@GEOEC), Facebook (@geoecalberta) and Instagram (@geoec). Do not hesitate to send us a note with any questions you may have.

I thank each and every executive member of our council for the time, dedication and effort they put forth to inspire and support educators across the province. GEOEC would be nowhere near what it is today if not for this inspiring team.

A huge thank you to all educators in Alberta for your amazing work in your communities. Best of luck with all your adventures, and we hope to see you on the trails really soon.

Court Rustemeyer

Message from the Editors

Welcome to the fall issue of *Connections*. Here, we highlight several Alberta educators and share practical resources to help shape our priorities in the 2021/22 school year and beyond.

Through the interviews in this issue, I was fortunate to engage in many inspiring conversations with outstanding educators. One thing that stood out was just how much Alberta's educators and organizations strive to inspire youth through their passion to be innovative, authentic and meaningful.

This past year, we have seen a return to the values of getting outside and learning from those experiences. As part of GEOEC, which supports global, environmental and outdoor education, I have seen educators recognizing the importance of connecting to the local land and environment and acknowledging how teaching outdoors enhances students' learning. GEOEC has seen record numbers of educators joining our council and attending our workshops.

Many people have been turning to outdoor spaces. Familiarity with natural spaces in the community encourages children to learn about the interrelationships between the species that live there, as well as the significance of the cultural heritage associated with the spaces. This leads to meaningful actions of caring for the environment and each other. I am excited to see where this newfound passion for getting students outside will lead.

Connections aims to support and promote learning through dialogue, research, thinking and practice by providing a variety of critical perspectives from a vast field of shared experiences. There is much in this issue to inspire your thinking. In the GEOEC Business and News section, you'll read about the ways GEOEC helps educators, including our outstanding conferences, workshops, website resources and online community-building meetings. We have plenty in the works for the coming year, so remember to become a member so you don't miss out!

Alison Katzko

For me, being involved in the production of this evolving journal fulfills both a professional purpose and a personal passion. As coeditor, I am about to launch into a year of innovation with GEOEC, as the council holds firmly to its principles while embracing the new needs of our times.

Teachers supporting teachers means greater opportunities for the students in our instructional communities. GEOEC facilitates and promotes the

growth of global awareness through local action and improved environmental practices, which is evident in the scope and diversity of the articles and authors herein. From neighbourhood parks and public playgrounds in urban settings to rural landscapes and remote wilderness areas, nature abounds. Our awareness of its importance to our existence is promoted through sharing our experiences with each other. GEOEC continues to lead efforts to build community connectedness and resilience, improve wellness, and encourage the development of relevant course content for youth.

Connections serves as a professional conduit for us to build relationships of significance that inform our practices as teachers, inspire confidence in discovery and exploration, and create a community of collective action. Our profession is all about making connections, and we hope you find more of them here.

Abi Henneberry

Submissions Information

If you would like to share resources, topics or ideas with fellow educators through *Connections*, we would love to hear from you! We especially seek lesson ideas and stories about your adventures with students.

Articles, artwork and photographs can be submitted year-round. With your submissions, please include a short biography (one or two sentences).

Consent is required to publish personal information about an individual. For more information, please see Publishing Under the *Personal Information Protection Act* at the end of this issue.

Send your submissions to Attn: GEOEC Journal Editor, Edgemont School, 55 Edgevalley Circle NW, Calgary AB T3A 4X1; e-mail connections@geoec.org. If submitting by mail, please include your mailing address.

GEOEC Business and News

GEOEC Updates

Tyler Dixon

The Year Learning Went Outside

The 2020/21 school year was anything but normal. Through the various waves of COVID-19, teachers across Alberta were asked to do more with less. Abiding by ever-changing health protocols; pivoting between face-to-face and online learning; and trying to keep our students, our colleagues and ourselves safe from an invisible virus have been stressful and tiresome for all.

One positive thing that has emerged during this global pandemic is the emphasis on outdoor learning. No longer the realm of only physical education or electives, outdoor education is now being embraced by educators across all grades and subject areas. With this newfound interest in taking their classrooms outside, teachers are hungry for resources and professional learning opportunities to help with this transition. As is our mandate, GEOEC is here to help.

If you've been a GEOEC member for the past few years, you already know that we offer a variety of PD opportunities throughout the school year. Historically, these have all been in-person events, but with ongoing restrictions, group gatherings have not been possible. As a council, we made the choice to move our events online. The irony of an outdoor-based council operating solely on digital platforms is not lost on us.

We kick-started the school year in early October with the Alberta Outdoor Playlist webinar. Participants heard from various service providers—including Alberta Parks, Inside Education, Take Me Outside, Alberta Tomorrow, Parks Canada, the Canadian Parks and Wilderness Society (CPAWS), and Company of Adventurers—about how they had modified their programs to comply with COVID-19 protocols.

In November and February, we hosted two sold-out Project WILD training and certification courses and will continue to offer those going forward.

The Bunnyhill Experience workshop, for first-year and preservice teachers, took place in mid-November. Presenters included Inside Education, the Canadian Wildlife Federation and Esri Canada.

GEOEC president Court Rustemeyer offered an Outdoor Council of Canada field leader training and certification program in early December. Six teachers completed the course and received certificates of achievement. This program will be offered again at various times throughout the coming year.

Also in early December, Court presented on the topic of outdoor education and experiential learning to educators and administrators at a divisional PD day in Fort McMurray.

In mid-December, just before the break, we hosted a second Alberta Outdoor Playlist webinar. This one built on the success of the first but featured service providers from the northern part of our province, including Alberta Bats and Nature Alive Adventures.

In March, we reconvened online for Little Adventurers, a workshop and networking event aimed specifically at K–5 educators. We were joined by Inside Education, Nature Alive Adventures and Abi Henneberry, who provided resources for elementary teachers.

In mid-April, we offered the Connecting Our Well-Being to the Land virtual event, which focused on teacher wellness. We welcomed guest speakers Heidi Widmer, a Canadian Olympian; Cassandra Troughton, from Edmonton Public Schools; and representatives from the Fort McMurray Public School Division's land-based learning camp program.

At the beginning of May, GEOEC and the Health and Physical Education Council (HPEC) cohosted Spring Equinox: "Outdoor Play: Nature's Vaccine." This two-day online conference offered plenty of wonderful sessions, as well as keynote addresses from Olympian Heidi Widmer and Sean Lessard, an associate professor of secondary education at the University of Alberta, specializing in Indigenous education and teacher education.

On top of all that, we hosted a monthly virtual campfire chat, where educators from across the province shared what was happening in their classrooms in the area of environmental and outdoor education.

Finally, in the spring, we launched Grow Alberta for the second year. This program aims to get seed kits into the hands of as many Alberta students as possible. Last year's program was an immense success, and this year it surpassed our lofty expectations, with over 18,000 kids signed up. Informal gatherings gave like-minded teachers excellent opportunities to network and gain valuable ideas to implement in their own classrooms.

Although the year was filled with uncertainties and unknowns of all kinds, what we gained through these online connections was encouraging. We miss seeing all of you and hope that some degree of normalcy returns for the 2021/22 school year so that we can welcome you back to in-person events.

Stay tuned for announcements about upcoming PD opportunities from GEOEC.

If you are not yet a member of GEOEC, we would love to have you! Several workshops and training sessions will be offered for members only, and we don't want you to miss out. Also, to continue offering PD events, GEOEC needs members like you.

All active ATA members are entitled to join one specialist council of their choice each year at no cost. Go to www.geoec.org/membership.html for more information.

Project WILD Training

Project WILD is a wildlife-focused program for K–12 educators and their students. Since 1984, Project WILD has been a model for WILD Education programs in Canada. Throughout the year, GEOEC provides free educator certification training for members. Based on educational standards, developed by scientists, and reviewed and field tested by educators, Project WILD is always a hit with educators who are looking for useful resources and ideas.

What It's All About

Through the training course, participants will learn how to use the interdisciplinary activity guide, which features 121 lesson plans on wildlife and the environment that can be adapted for any age, grade level or subject.

The active lessons cover topics and concepts such as the following:

- Adaptation
- Carry capacity
- Food webs
- Habitat
- Life stages and life cycles
- Renewable and nonrenewable resources
- Succession
- Symbiosis, commensalism, mutualism and parasitism

Why You'll Love It

Project WILD helps learners develop the awareness, knowledge, skills and commitment needed to make informed decisions; take constructive action; and advocate for wildlife, habitats and the environment.

The activity guide has been adapted for a Canadian context by the Canadian Wildlife Federation and brought to you under a joint agreement with the Association of Fish and Wildlife Agencies in the United States.

The guide can be used by classroom teachers and other educators (including resource specialists, conservation officers, camp counsellors, and Scout and Guide leaders). It contains all the information needed to successfully plan and run activities with students, including objectives, methods, background information, lists of materials, procedures, evaluation suggestions, activity extensions and key vocabulary. The activities are designed to enhance learning in mandated curriculum subjects such as art, health, English language arts, math, music, physical education, science and social studies.

Ready to go WILD? You can obtain the Project WILD activity guide by participating in an introductory workshop, where you will become a Certified WILD Educator.

If you are interested in attending a workshop, please visit the GEOEC website (www.geoec.org) for upcoming dates.

Around the Campfire

In March 2020, when the Alberta government announced that schools would be moving to online and distance learning, Adam Robb knew that connection would play an essential role in maintaining mental and emotional health for educators. So he began scheduling informal online meetings called Around the Campfire.

At the first meeting, on November 30, 2020, educators from across Alberta convened online to network and tell stories. They were excited to connect and discuss new ideas and possibilities in order to better themselves and their students in the name of outdoor education. GEOEC has since held Around the Campfire chats in March and June.

Before the pandemic, technology in the classroom was largely viewed as a significant source of distraction. Since online and distance learning became our reality, technology has become key to keeping everyone connected. Having a sense of community and knowing that you have a group of people who will support you can make a big difference in the work you do.

Here is how an Around the Campfire chat is organized. The session begins with GEOEC president Court Rustemeyer warmly greeting everyone and thanking them for coming. Adam Robb, the coordinator, then asks participants about their current projects and experiences. The topics can include lesson delivery, engaging students with games, success stories and online resources. As the session ends and we say our goodbyes, not with sadness or grief but with anticipation and excitement for things to come, we are renewed.

These informative chat sessions help educators feel inspired, connected and supported. It is exciting to hear about the incredible experiences in which Alberta students are engaged, and participants establish and maintain connections through communities of practice.

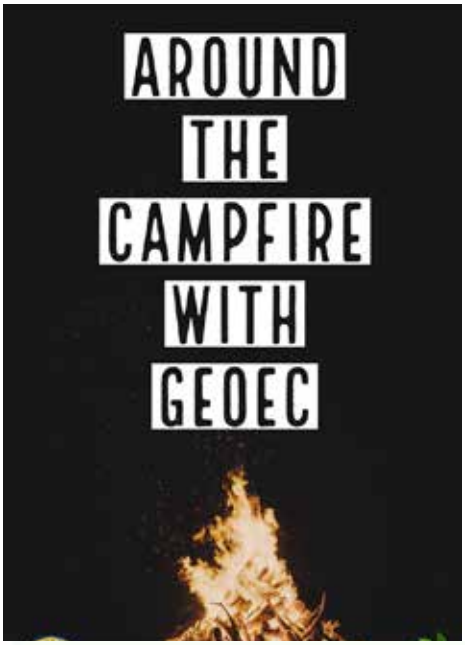
For those who have attended, we thank you for your dedication and passion. Your students are lucky to have you. We hope you found the shared stories and resource ideas from the chats helpful, and we hope to see you again soon at one of our events.

We highly recommend joining our community of practice. It is a great way to build your professional network and learn about the inspiring and interesting things happening in classrooms across the province.

For information about upcoming events, visit www.geoec.org.

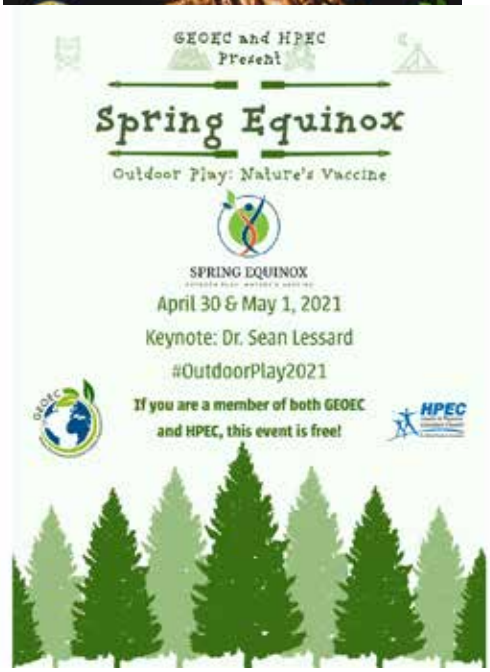

ALBERTA OUTDOOR
PLAY-LIST
PRESENTED BY GEOEC


Connecting Our Well-being to the Land
presented by GEOEC
Register @ www.geoec.org


AROUND
THE
CAMPFIRE
WITH
GEOEC


Outdoor Playlist
Volume 2
Outdoor Ed Playlist
Vol. 2
Volume 2 of our Playlist series is happening on December 10, 2020 from 7-9pm. We'll be hearing from provincially-based service providers with a focus on central and northern Alberta.


Little Adventurers
Presented by - GEOEC
Inside education
Register @ www.geoec.org
March 1st - 7pm
With Guest Speakers from:
Inside Education
Abe Hennessey
NATURE ALIVE
The Alberta Teachers' Association


GEOEC and HPEC
Present
Spring Equinox
Outdoor Play: Nature's Vaccine
SPRING EQUINOX
April 30 & May 1, 2021
Keynote: Dr. Sean Lessard
#OutdoorPlay2021
If you are a member of both GEOEC and HPEC, this event is free!
HPEC


Around the Campfire
with GEOEC
Thursday, Feb 4th 7:00-9:00pm


GEOEC PRESENTS
The Bunnyhill
Experience
A FIRST-YEAR & PRE-SERVICE
TEACHER WORKSHOP

Featured Outdoor Location

Whistler Mountain Trail

Don McLaughlin

Round-trip distance—8.8 kilometres
Elevation gain—900 metres
Access timeline—late May to October
Parking location—N 49 19.585 W 114 19.700

The Whistler Mountain Trail is a well-signed and well-maintained trail that leads to a scenic viewpoint overlooking Beaver Mines Lake and the South Castle Valley. The hike to the summit is fairly short, but it involves plenty of elevation gain (900 metres). Near the top are two viewpoints: the old fire lookout to the north and the summit roughly 750 metres to the southeast of the old lookout.

On the summit ridge is a trail junction offering an option to continue northeast to Table Mountain. We opted to return to the parking area via the same trail and enjoy the amazing views of the South Castle Valley.

If you're into backpacking, you can use the same parking area for a trip into the Grizzly Lake and Ruby Lake backcountry campgrounds (12–14 kilometres one way).

Getting There

1. Take Highway 3 (Crowsnest Highway) and then Highway 507 south to Beaver Mines. Head straight through Beaver Mines, where the road becomes Highway 774, and head toward the Castle Mountain Resort.
2. Turn left 14.8 kilometres south of Beaver Mines, on the gravel road leading to Table Mountain and Beaver Mines Lake.
3. Travel east on the gravel road for 3.7 kilometres and then turn right onto the South Castle Road.
4. Follow the South Castle Road south for 5–7 kilometres to the trailhead and parking area (look

for a concrete barricade at the end of the road). The road south is fairly primitive, with plenty of challenging little spots that can be easily passed (even with a small car).

5. After parking, walk south along the South Castle Road (closed to motorized traffic) for 450 metres to the Whistler Mountain Trail. The trail is well signed at the parking area and at the trailhead on the east side of the road.

Track and elevation profile

Don McLaughlin is a Grade 5 teacher in Calgary and GEOEC's secretary and past president. He is passionate about not only taking students outdoors but also helping guide young teachers on adventures. He has been on the GEOEC executive for more than 10 years, serving in many roles. In his free time, he can be found exploring mountain views on lesser-travelled trails throughout central and southern Alberta.

Articles

Wild Jobs: Mountain Sledding Guide

Tyler Dixon

Wild Jobs is a running series that focuses on people in outdoor-related professions. It provides a brief snapshot of their careers and the duties they entail.

Winter mountain sports have a rich history that dates back decades, unless of course you're talking about mountain sledding. When compared to backcountry skiing and snowboarding, or even more-contemporary forms of those sports, such as cat or heli skiing, mountain sledding is still the newest kid on the block.

Way back in the depths of Allan Creek, one of Valemount's prime locations. Photo courtesy of Frozen Pirate.

Mountain sledding didn't really hit the mainstream until the mid-1990s but has been booming ever since. The sport has seen rapid growth since those humble beginnings. The leaps in sled technology alone have been mind-blowing, leading to increased capability and participation. In 2009, SledComm, the Avalanche Canada Snowmobile Committee, was established to meet the need for snowmobile-related issues around public avalanche safety. There are now sledder-specific avalanche safety courses available to better prepare backcountry users. To meet the demand, there are now a host of qualified big mountain guides across western Canada.

One of the greatest pleasures of guiding is introducing new people to places that very few get to see. James is a 12-year-old fella that we had the pleasure of introducing to the mountains. Photo courtesy of Frozen Pirate.

It's the guiding piece that will be the focus of this instalment of Wild Jobs. Recently, I had the pleasure of interviewing Curtis Pawliuk from Frozen Pirate Snow Services, which is based in Valemount, BC. Originally from Prince George, Curtis has called Valemount home for the past 20 years. He spent some time as a fly-fishing guide before graduating from Prince George's College of New Caledonia with a certificate from the

Northern Outdoor Recreation and Ecotourism (NORE) program. Today, he is fully immersed in his community and the avalanche world. He's a 10-year member of the Avalanche Canada board of directors, sits on the British Columbia Snowmobile Federation board of directors, and is the owner and operator of Frozen Pirate Snow Services.

Even with all of that, plus raising a young family, Curtis managed to find some time to answer all of my questions. What follows are the highlights from a memorable conversation with Curtis about what it's like to be a snowmobile guide in the mountain paradise of Valemount.

The Pirate himself in his element. Photo courtesy of Marshall Dempster.

How did Frozen Pirate come to be?

I really enjoy being a guide and sharing the backcountry with other people. Mountain sledding can be pretty hard to understand if you're on the outside looking in. In all honesty, Frozen Pirate is primarily a sledder-specific avalanche safety training (AST) business. Of course, we are also a fully certified and licensed guiding outfit. We tend to train more than we guide. We teach upward of six AST courses per month and are guiding several times each week. It's just me and one other person, Marshall Dempster, who is also an experienced and certified mountain veteran. Marshall is my right-hand man, and I could not do it without him. We also have one more guide that's on call during busy periods.

Are there any certifications or training that is required to be a guide with Frozen Pirate?

There's no governing body for sled guiding, but it's in the works. We hold a very high standard for staff and our operation. All guides are professional members of the Canadian Avalanche Association. We also do rigorous in-house training with our guides.

Marshall Dempster explaining flux lines and giving an orientation to a group of AST students. Photo courtesy of Frozen Pirate.

What made you want to become a snowmobile guide?

We all want to turn our hobbies into our profession. I love sharing the mountains with others, and I like being part of growing the sport. There was a niche for professional and legitimate guides in the Valemount area, and I knew I could fill that gap.

What's the best thing about your job?

Getting to do what I love on a daily basis. I am always in the mountains. It doesn't get any better!

What's one of the most challenging aspects of your job as a guide?

Accepting liability for what we're doing. We work in heavy terrain, so we always have to balance customer desire with internal performance measures. The mountain tells us what we can do each day. It's always up to them. It's difficult to meet client expectations while balancing safety in this industry, but that is what we do well. Safety is first and foremost for your crew.

Mountain friends are the best friends. Even on the rare day off, the Pirates are in the mountains. Photo courtesy of Frozen Pirate.

Snowmobiling is obviously a winter activity, so what keeps you busy during the snow-free months?

I am the general manager and executive director of VARDA (Valemount and Area Recreation Development Association), which is my full-time job. It's a not-for-profit association that consists of local business and backcountry users. Our goal is public education to help improve backcountry use for all user groups. Part of my role with VARDA is to develop our growing mountain bike industry. The Valemount Bike Park is quickly becoming the favourite destination for riders of all ability levels. It's growing fast, and it's exciting to be a part of it.

Let's take a virtual look at your gear. What essentials do you bring with you every time you're out on your sled?

We are Ski-Doo enthusiasts, so we ride exclusively Bombardier products. Our current sleds have the world's first factory-built 2-stroke turbocharged engines! We are supported by some amazing companies that allow us to continue to operate. Our biggest sponsor is Martin Motor Sports, and without their support we couldn't do what we do. We all ride with avalanche essentials: Highmark airbags, Mammut Barryvox transceivers and Klim sledding gear. It would be a disservice to ourselves, our families and our clients if we didn't have the ability to spend the night somewhat comfortably on the mountain in case of an emergency. So we also carry camp stoves, bivy sacks, extra food and clothing, satellite devices, a snow/wood saw, and so on. Probably the nicest luxury for a day spent outdoors, though, is a warm cup of soup. In sledding culture, lunch is usually a chocolate bar and some beef jerky, but when we bring out a thermos with piping hot soup, that really hits the spot. And the envious looks start to appear!

Snowmobiling is an inherently dangerous activity, and sledders (as well as other backcountry enthusiasts) are in the headlines each winter right next to the word *avalanche*. How do you mitigate those risks for yourself and your clients?

It really is a daily process. We don't wing it, ever! We need to alleviate all of those human factors that can get us into trouble, and that's not always easy to do. We assess the avalanche hazard, look at the weather, consider the group's skill level and then put all of that out on the terrain. Terrain is always the last piece of the puzzle and the one thing we can control. We can always control what terrain we put ourselves and our guests on.

Why should someone hire a snowmobile guide?

A guide takes the uncertainty out of your trip. Most folks have invested large sums of money for their sledding trip. Guides know the area, the avalanche terrain and what the weather was doing prior to your arrival. With a guide, I can pretty much guarantee you'll have one of the best days you've ever had on a sled.

It's about the backcountry first and foremost. It doesn't matter how you enjoy it. Here, Curtis Pawliuk, owner of Frozen Pirate, takes a rare day off and heads into the mountains on his splitboard. Mount Robson is standing tall in the background. Photo courtesy of Randy Pruden.

What sets Frozen Pirate apart from its competitors. Why should folks choose you?

Honestly, there's not a lot of competitors in our area. Becoming licensed through the provincial government is a huge time commitment and quite difficult to achieve. You also can't just be a guide; you need a Crown land tenure in order to operate legally on Crown land. Professional-level avalanche training takes strong dedication and roughly four to six years to complete, and that is only one aspect. Also, the standards we hold as an operation are at the highest level.

Views like this are why Curtis fell in love with the backcountry. Photo courtesy of Frozen Pirate.

Spend even just five minutes talking with Curtis, and it's easy to see just how passionate he is about sledding and the outdoors as a whole. His dedication to the sport and sharing the backcountry with others is inspiring. As he said, we all want to turn our hobbies into our profession, but most of us are never able to get to that point. Curtis is living that sentiment and is proof that with hard work and dedication you can get there.

This story has been stuck in the planning phase for more than a couple of years now. That patience has paid off, as I believe Curtis was the ideal person to be interviewed for Wild Jobs. I feel privileged to have him featured in this column and would like to thank him for his time and for sharing his story.

An adventure with the Pirate Team often leaves you speechless. Photo courtesy of Frozen Pirate.

To book your next avalanche training course or guided sled adventure, please visit the Frozen Pirate website (www.frozenpirate.com). You can also stay connected with them on Instagram (@frozenpirate), Facebook (@frozenpiratesnowservices) and YouTube (www.youtube.com/user/depsnolvr).

Tyler Dixon is originally from Saskatchewan, and, yes, he cheers for the Roughriders, but don't hold that against him, as Calgary has been his home for the past eight years. He is a teacher working at a wilderness-based treatment program for youth working to overcome addiction and is GEOEC's social media director. He is also a volunteer with the GOT Parks initiative, which aims at reconnecting Canada's youth with our national, provincial and territorial parks. During his time away from work, Tyler enjoys outdoor activities such as hiking, biking and snowboarding; team sports; travelling; photography; spending time with good friends; and being at home with his wife, children and German shepherd (Rome).

Reprinted with the author's permission from the Calgary Guardian, *February 11, 2021, https://calgaryguardian.com/wild-jobs-mountain-sledding-guide/. Minor changes have been made to fit ATA style.*

Trees as Community Builders

Chelsie Anderson

We all need a village in order to thrive. If you have a community that looks out for you, listens to you when you need to vent, drops off homemade soup or brownies when you are sick or down, or shovels your walk when you can't, then you have a chance to recuperate when times get tough. If you lack this community, you will suffer further (possibly from depression, anxiety or isolation). In this isolated state, it is much more challenging to get back on your feet. But, of course, I am not here to write about human interactions; I am here to write about plant interactions.

Plants also thrive in community. And who are the most amazing community builders? Trees! Once its seed sprouts, a tree is stuck in place for the rest of its life. It cannot run away, and it cannot move around to source food and shelter, so it has to establish a community that will serve it and that it can serve in return. Nature always reciprocates.

What a Tree Offers

- *Photosynthesis*. Through collecting sunshine via its leaves and converting this light into sugar, a tree has stores of tradable goods.
- *Protection*. A tree can offer protection from inclement weather, wind and nosy neighbours.
- *Food*. A tree can provide food, not only for humans but also for animals, birds, insects and microbes.

What a Tree Needs

- *Nutrition*. A tree has access to loads of sugar, but we all know what happens to us on a sugar-only diet. Our health suffers, and so does the health of a tree. A tree also needs minerals, so it makes connections with the local friendly fungi, who are only too keen to connect. Fungi cannot photosynthesize, so they need sugars; in return, fungi are an efficient and effective nutritional delivery system. I can imagine the fungi saying, "What's that? You need some zinc? I'll be right back." Soon enough, the tree has just what it needs—zinc. In this way, the tree is not force fed, as it is when humans intervene with chemicals. We tend to feed trees unnecessary levels of NPK (nitrogen, phosphorus and potassium), as this is our understanding of what a tree needs, when, really, a tree may be short on magnesium or calcium or iron. No problem—the fungi are on it! Unless of course, humans intervene and kill off all of nature's microbes through applying pesticides, fungicides or herbicides, which will then render a tree completely dependent on humans for food into the future.
- *Family who can communicate*. Like humans (or any other critter, for that matter), trees rely on messages and comfort from neighbouring trees. Warnings, for example, can be very valuable in order to stay safe. Through the Wood Wide Web, trees communicate distress signals, telling others that caterpillars have been munching on their leaves. The response? Neighbouring trees release a bitter compound into their own leaves, making them less palatable to this pest. Or sometimes trees send out messages to predators if they need help getting rid of an invading critter ("Calling all birds! Free buffet to all who arrive immediately! I have a caterpillar infestation!"). They send these messages by brightening their leaves (in a way visible to the natural world but not to us). And the birds come, like a cleaning service, and eat wood-boring beetle grubs. Or the fungi kill off aphids on leaves or kill springtails, a soil-dwelling creature, whose bodies then feed a tree much-

needed nitrogen. I kid you not—friendly fungi are not friendly toward critters that provide nutrients! In exchange for offering the protection of their branches to birds, trees now have natural and built-in pest control, as birds will gobble down huge numbers of insects. Robins, for example, eat several kinds of insect grubs, slugs and wireworms. In return, some trees provide fruit to help sustain bird populations during the winter months (mountain ash trees have bird-friendly berries, for example). It's a win-win.

All of this community building, of course, benefits a tree immensely, but it also benefits its surrounding partners. So choose a tree that will benefit not only you but quite likely the whole community, and plant it among its pals: healthy soil, protective vegetation and critters who will love it as much as we will.

Robin

Mountain ash

Mushroom

Chelsie Anderson is the owner and operator of Chelsie's Garden Soil-utions, a Calgary-based organic garden design, installation and maintenance company. She is a regular contributor to CBC Radio and CTV and is the coauthor (with Donna Balzer) of the Three Year Gardener's Gratitude Journal. *Chelsie is always up for a challenge and inspiring outdoor work. She spends her free time growing food for her three kids, two guinea pigs and millions of red wiggler worms; she knows that all good things start in the soil. She can be found online at www.chelsiesgardens.com.*

It's the Journey, Not the Destination

Beth Townsend

A few years ago, my friend Breanne and I decided to hike Coliseum Mountain Trail near Nordegg. The trail is rated as moderately difficult by AllTrails (a must-have app) and is a popular day hike in our backcountry.

Coliseum Mountain

When we got to the staging area, it was packed full of vehicles. After finding a spot to park, we packed our gear, used the outhouse and then headed to the trailhead at the back end of the parking lot. Breanne had been there before and had hiked along the base of the mountain for an hour or so with some GEOEC members during a break from the fall retreat. We started on the trail, merrily chatting in anticipation of the adventure that awaited us.

After a while, the hike seemed to be pretty uphill, which we found odd as we thought it would be full of switchbacks, but we dug in and continued on with our mission. Eventually, we saw flagging tape on a few trees and decided that we must be heading in the right direction. However, now we realized that we had not seen a single person on the trail, even though the parking lot was full.

I am from southern Ontario and had then only lived in Alberta for about two years, so I was a beginner when it came to hiking. Hiking quickly became a passion of mine, and my strategy was to keep a steady pace, focus on my footing and enjoy the moment. I had come across a small section of scree some time before, while hiking a nearby trail called Allstones, and I hated it! Going up was OK. I crawled like a bear on my hands and knees and gave myself a pep talk through it. Going down was entirely different. It triggered the freeze in my fight–flight–freeze response. I eventually made it down but very slowly, with the help of a lot of cursing and an encouraging mantra. I avoid the Vision Quest trail to this day, as I do not want to deal with its scree section.

So back to our Coliseum Trail dilemma. We hadn't seen a soul, and we found ourselves on our hands and knees scrambling up a face. I'm sure the views were breathtaking, but there was no way I would have noticed. Instead of giving myself a pep talk and cursing under my breath, I was swearing right out loud for the entire mountain range to hear. The only reason I wasn't in a total panic at this point was that the neighbouring peak, Baldy Fire Lookout (another moderate hike with fantastic summit views), held a tower that offered good cell reception.

Clawing our way forward, we ultimately made it to flatter, solid rock, and we finally saw some other people. We flagged them down and asked them if there was another way down, because there was no way I was going down that slippery, sliding scree death trap. Our fellow hikers looked at us and replied, "Oh, yeah. People don't normally come up that way." They then pointed us toward the commonly used moderate trail.

As we headed along the mountain pass, Breanne pointed out that we still needed to summit. My only thought was, *Get me off this $%!# mountain!* Calm and collected, Breanne said, "We've made it this far. We have to finish!" So, with great bitterness, I agreed to climb the final 50-metre section (at a 75-degree angle) to the summit, where we sat down to enjoy our well-earned lunch while taking in the breathtaking 360-degree views of David Thompson Country.

Summit from the wrong path

View of the scramble to the summit from the correct path

After our much-needed break, we followed the path more travelled by, and that made all the difference. It was full of switchbacks, and Breanne and I shared great conversation and happily made our way back to the staging area. The parking lot was now empty and, what do you know, we walked directly past a large sign that read Coliseum Trail and a giant arrow pointing to the trail.

A couple years later, I met up with my friend Kelsey, who was camping at the Crescent Falls Campground, just west of Nordegg. By the time I arrived, she had already taken her four-legged friend on a hike along the canyon, but I was still interested in going for a hike. I mentioned that Coliseum was nearby and that hiking it properly was still on my to-do list. This time I knew where to start!

After an hour or so, we met some hikers on their way down. (Perfect! We were going the right way!) When they informed us how much farther we had to go, Kelsey and I looked at each other and decided that today wasn't the day. Feeling happy with what we had accomplished and experienced, we turned back. We then stopped in Nordegg for our favourite soda beverage. A framed picture of us enjoying that refreshment now sits on a shelf in Kelsey's kitchen.

As a high school phys ed teacher, I decided to plan a hiking trip with some of my Grades 11 and 12 students. What a great way to spend a September day! I knew a few teachers who had hiked Coliseum with their students, and I thought that it would be the perfect challenge. Two other staff, 15 kids and I headed out. When we embarked on the trail, the sky was a mixture of sun and cloud, and a less than 50 per cent chance of precipitation was forecasted. Knowing that mountains make their own weather, I had told my students to pack appropriately and dress in layers.

Starting the journey with students

About 30 minutes into the hike, snow flurries started—just enough to make it pretty without accumulating. Some switchbacks later, fat, fluffy snow began to fall. The students continued on their merry way, excited about the journey that lay ahead. As we reached the exposed ridge that led to a narrow path to the summit, we were faced with a full-on blizzard. For safety reasons, we decided to turn back. The students didn't seem to mind. They were just enjoying the adventure outside of the four walls of the classroom. After this hike, I decided that it would be a good idea to take the Outdoor Council of Canada's field leader hiking course, to learn ways to keep all my ducks in a row during hikes with students.

Blizzard before the exposed ridge

During the first summer of the COVID-19 global pandemic, I found fulfillment in continuing my exploration of Alberta's incredible outdoors. Again, I attempted to summit Coliseum using the correct path. Another friend of mine, who is a beginner when it comes to hiking, was excited to meet up with me, along with her husband and teenage daughter, to tackle the climb. When I pointed to the summit from the Miners' Cafe in Nordegg (fantastic pie, by the way!), she was amazed that that was our destination. We enjoyed incredible weather, easy switchbacks and gorgeous views. Along the path, I met two of my former students, one of whom had been with me on the previous attempt and was now returning from the summit with his family.

Successful summit

That same summer, Breanne and I went on a camping and hiking trip in Kananaskis—a place neither of us had really explored before. From this trip, we learned that the best views come after the hardest climbs, that you should pack extra water, that the trail is always longer than you bargained for, that it's not a great idea to hike close to the time of sunset and that buddies who hike together stay together.

Happy trails! And remember—it is the journey that counts, not just the destination!

Originally from Ontario, Beth Townsend has been teaching in central Alberta for seven years and has had a range of assignments. She is always happy and willing to add some form of environmental or outdoor education to her lessons. She is also GEOEC's treasurer. Since moving to Alberta, she has enjoyed exploring the mountains through hiking and camping. She also enjoys fishing, snowshoeing, slow-pitch and basketball.

10 Strategies for Strengthening Outdoor Learning at Your School: An Iterative Sequence for Multiple Age Groups

Jennifer Baron

It was hard to leave the ideal job of outdoor education centre teacher once my term was over and I needed to return to the classroom. I felt claustrophobic inside those four walls. I knew I wanted to take my homeroom and rotary science classes outside. However, at my new school, I lacked both the official mandate and resources to take the learning outside like I had done while working at the wonderfully stocked outdoor education centres. That was over a decade ago, and since that time I have learned how to overcome these problems by applying many strategies to strengthen outdoor learning at the schools where I teach.

With the return to school in the midst of a global pandemic, some school leaders may have embraced outdoor learning with the thinking that it affords more space for physical distancing and, conversely, less shared indoor air, thereby lessening the potential for virus transmission. That being said, simply transporting learning outdoors—in essence, getting rid of the four walls and copying indoor learning methods outside—does not necessarily lead to greater student achievement and well-being. My proposition is that there is an outdoor education continuum, with the infrastructure of a well-established outdoor education field centre on one end compared to attempting to replicate indoor teaching outside of the four walls of one's school at the other end.

The purpose of this article is to share 10 high-yield strategies, which are based on taking my experiences as an outdoor education and classroom teacher and applying them to any school with the goals to support COVID-19 protocols, as well as academic achievement and well-being. The 10 strategies below flow into one another. They are iterative and applicable to students of any age; hopefully, you can apply them to build and strengthen the structure of outdoor learning at your school.

1. An Inquiry Approach

An inquiry mindset means that we have a spark of curiosity about something and a question to answer. Designing an open-ended inquiry question allows for multiple entry points and voices to come to the table to work out a solution to the problem. It's also cyclical: answers can lead to more questions.

I propose that in the midst of a global pandemic, as educators discuss returning to school, we have a collective question that lends itself to an inquiry approach. Here is the question: How do we take the learning outside while following physical distancing and other COVID-19 protocols? Note that I started with the word *how*. Inquiry questions that begin with *how* and *why* often lead to deeper critical thinking than questions that are easily searched online and tend to have simple, concrete answers. This broad question invites us all to

embark on a learning journey together. Remember, we are in a process of solving problems, so be sure to record your inquiry process from the beginning.

2. Teamwork

Now that we have established our inquiry question, it is important to gather a team. It will take support from system and school administrators, caretakers, families, students, and staff to support an entire school taking the learning outdoors. It is essential from the start to listen to and include all voices in your school community.

A few years ago, my principal recognized my passion for and expertise in outdoor and environmental education. She gave me the green light over the course of two years to lead inquiry-based professional learning collaboratives (PLCs) with our primary staff. In year 1, our PLC was Water Inquiry with an Indigenous Perspective. In year 2, we focused on Math on the Land. Based on that experience, I believe PLCs are some of the best methods within a staff to authentically improve collective pedagogy. There is a tremendous amount of knowledge and expertise within any staff! If everyone takes a learning stance, there is a more circular structure, as compared to a hierarchical structure. This stance of listening and learning from each other builds trust and mutual respect.

To gather information and build a common knowledge around outdoor education, choose resources that support high expectations for delivering the curriculum outside. We used *Natural Curiosity: A Resource for Educators: The Importance of Indigenous Perspectives in Children's Environmental Inquiry* (Anderson, Comay and Chiarotto 2017) as a mentor text. Of course, it may be necessary to bring in outside expertise at times, particularly to access cultural knowledge. I have often invited our partners in education from the Indigenous community to share their knowledge and ensure that we are moving forward in a positive way.

While the inquiry process moves from the spark of curiosity to the gathering of information and building of knowledge, continue to record your process as the cycle continues.

3. Consistent Routines

Under the shadow of a global pandemic, each region has necessary COVID-19 protocols to follow both in the school and outdoors. There are entirely new routines for countless numbers of students this fall, which no doubt will cause some anxiety.

Discuss the details ahead of time with your team to understand the risks and make outdoor learning as safe and successful as possible. You will have to work out how to physically distance outside (although much easier to do than inside) and deal with basic personal needs like hygiene, eating, water and bathroom breaks. Consistency among staff in routines will help students to follow them. Look for positive behaviour intentionally and reward it with praise!

One of the biggest issues I hear from teachers is that students don't come properly prepared to go outside in all weather. Sometimes I think this is a fixed mindset from teachers who are reluctant to go outside themselves, as I have taught at many schools impacted by poverty and when I communicate with families as early as possible about what children are expected to wear for outdoor learning, most children come prepared. That being said, if this is a large enough problem that needs solving, then apply a whole-school–community approach to ensure that students have the proper clothing and gear for inclement weather. Seek funding and donations for inclement weather gear, just like schools do for breakfast clubs. Decide as a staff where is the best place to store it, as well as protocols for lending or giving it to your students.

4. Align with System and School Goals

One of the greatest high-yield strategies for strengthening outdoor learning is to align it with school improvement and well-being goals. Across North America and beyond, these have traditionally been connected to literacy and math. The role of schools in facilitating social skills, mental health and emotional learning has

increased dramatically in the last few years, never more so in my 27-year teaching career than in 2020.

Leverage mental health and well-being goals to promote outdoor education and vice versa. Research has shown that connecting to nature can have a calming effect on anxiety (American Heart Association 2018). Teach students the simple practice of sit spots—being in the moment in nature listening to the sounds, observing a sightline well beyond the computer screen, feeling the breeze on one's skin. Edward O Wilson (1986) coined the term *biophilia*, which means humans are genetically wired to have need for feeling signs from nature to maintain mental health and well-being. All human beings! Ensure that your goals include an equitable approach that includes intentionally recognizing the past and present roles of people of colour, Black people and Indigenous people in the outdoors and environmental movement. The field of outdoor and environmental education has more work to do to meet these equity and inclusivity goals.

5. Survey Your Schoolyard

So let's say you've decided as a school community to take the learning outside. Great! But what if that means everyone takes their classes outside? How do you physically distance and share the space? And do you have enough resources and manipulatives?

Please, before you spend a lot of your own money (as we teachers tend to do) or take a large chunk out of your precious school budget, take a survey of what you already have at your school and in your schoolyard. When we did this at our school, our primary staff walked around the entire schoolyard, making notes about where would be good teaching spots for learning outside. We intentionally stretched our thinking about this to include overlooked places such as the tarmac and the built environment. Staff then placed the notes on an oversized outline map of our schoolyard with curriculum connections (see Figure 1). We then made a schedule for how to share the spaces on a one-day outdoor learning celebration that we had with system leaders and families. This method could easily be applied to a whole-school approach to outdoor learning.

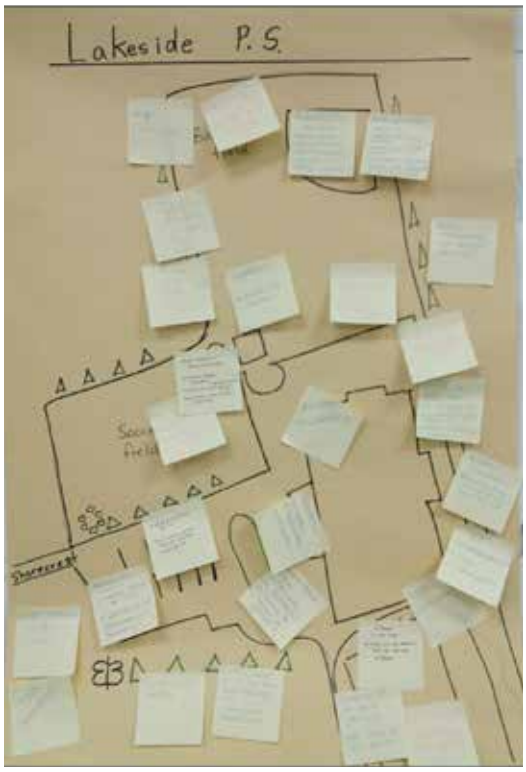


Figure 1. Schoolyard map with Post-it notes for ideas for teaching curriculum

6. Design Rich Tasks

The Instructional Core is used in *Instructional Rounds in Education*, by Elizabeth City, Richard Elmore, Sarah Fiarman and Lee Teitel (2009). It refers to an equilateral triangle where Student, Teacher and Content are at the vertices and Task is in the middle. (See Figure 2.) In essence, this means that the greatest impact one has to elevate learning is to design a rich task. This does not look like importing boring rote tasks from inside the school and assigning them to overly disciplined and anxious students. Instead, use best practice to design open-ended, inquiry-based problems that allow students to critically think and get creative.[1] I know my first math question outside will be, "How can we see what two metres or six feet look like using natural materials?"

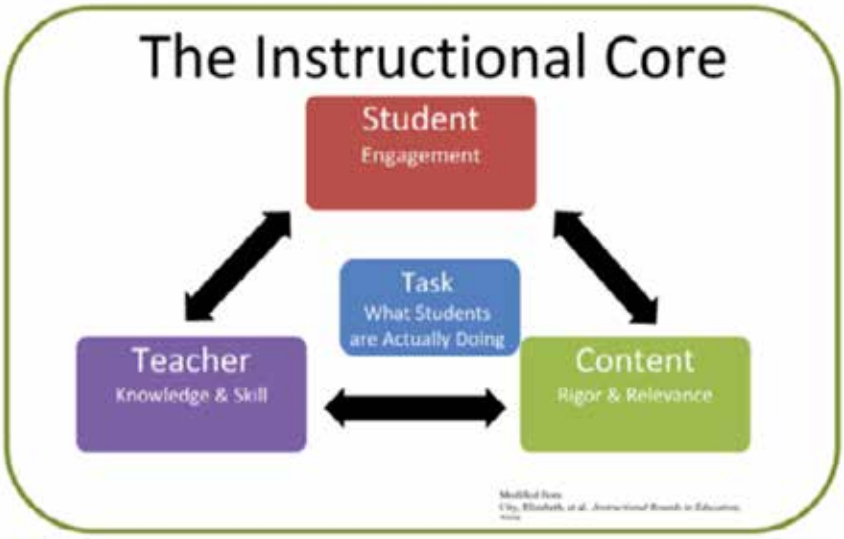


Figure 2. The Instructional Core

7. Integrate Subjects

Quite a few years ago, a research study showed that conducting integrated inquiry projects with an environmental theme closes the achievement gap (Lieberman and Hoody 1998). It's common to feel that there are too many curriculum expectations to cover. Many teachers have a cohort to teach most subjects. Integrating subjects via inquiry-based projects with an environmental theme has infinite potential for designing these rich learning tasks. Here are examples for core subjects based on the model of the water inquiry I led at my school. Our broad inquiry question was, What is our relationship to water?

Literacy

We read high-quality books, such as *The Water Walker* (Robertson 2017), outside with our students. This book tells the story of Josephine Mandamin, who walked around the Great Lakes to raise awareness about protecting water. While outside, the students wrote poems, stories and letters about water and their relationship with it.

Math

We walked to Lake Simcoe, our source of drinking water, and estimated and measured the distance from our school. Students measured the capacity of various containers at water tables set up outside. We discussed our amount of water use. Once we realized how much we used and wasted, students and families took pledges to conserve it at home and school.

Science

Students observed the water cycle outside and created labelled diagrams about it. Older students could learn about water systems and watersheds in their communities and beyond.

Geography

Students investigated their source of drinking water outside and where their wastewater goes. They realized that it's all part of a cycle, which made them want to keep our lake clean. We designed water filters and did a litter pickup between our school and Lake Simcoe.

Social Studies/History

Towana Brooks, our First Nations, Métis and Inuit consultant at the time, taught us that in Indigenous cultures, water is sacred.[2] She explained that our relationship with water is reciprocal because we are over 60 per cent water, so we should respect and take care of it. We realized that historically there are social justice issues about lack of access to clean drinking water in many First Nations in Canada. This surprised our students (and, frankly, many of our staff), as Canada is known around the world for having so many lakes and such clean water! The students wanted to become water walkers to protect the lake and keep everyone's sources of drinking water clean.

The Arts

Towana taught the teachers the Nibi water song in Ojibwe, and, in turn, we taught over 200 students. They sang it to their families at our celebration day about water and learning outside. Towana taught us how to make mini copper pot

necklaces with beading patterns, an activity that connected to our math curriculum. She explained that Josephine Mandamin always carried a copper pot with her while she walked around the lakes on her journey to raise awareness about protecting water.

Natural Curiosity awarded our school with the Edward Burtynsky Award grand prize for excellence in environmental education for The Water Inquiry with an Indigenous Perspective. We did not start this inquiry with the intention of winning an award; regardless, it developed into a rich learning experience for our entire school community.

8. Plan with the Seasons

Phenology refers to how seasonal changes in light and climate affect plants and animals in any local habitat. Although climate change may be wreaking havoc on seasonal changes, there still are predictable patterns. You can find out more by researching the Indigenous moons in your geographical area. For example, in my area, October in Ojibwe is called Binaakwe Giizis, or Falling Leaves Moon. I can apply this traditional Indigenous Knowledge to plan in math and art for patterning and symmetry with autumn leaves. Using the farmers' almanacs will also help you plan out your year for predictable natural events. Apply phenological principles to finding seasonal loose parts—sticks, leaves, pine cones, flower blossoms, mud, snow—as manipulatives that support teaching outside. Nature provides these materials; you don't need to buy or sterilize them, and they can be left on the ground to decompose or melt.

9. Developmental Approach

Young children have a natural curiosity. I have observed even the unruly student inside become deeply engaged with hands-on, experiential learning outside. This includes adolescent-aged students.

With our youngest students, it's ideal to nurture curiosity and deepen the connection they have to the natural world. As they begin to understand abstract concepts, they will be able to understand complex interconnections in habitats and ecosystems. It will then be a short leap for them to realize that Earth's natural habitats are infinite. Students are beginning to realize that species are endangered and going extinct at earlier ages now than they did when I grew up. They hear about climate change and get anxious. Right now, this is compounded by our stress of living in the midst of a global pandemic that is highlighting social justice and equity issues.

One way to deal with these issues is to harness the resulting sense of urgency and get active. Youth and adolescents have a powerful energy to move from being engaged to acting empowered. Youth are quickly becoming the change they wish to see in this world. Teachers can support them in this very important work. We can also help them find a pathway in high school and beyond in outdoor and environmental fields.

10. Leverage 21st-Century Skills

This global pandemic jettisoned educators to implement tech tools and online learning at warp speed. Let's not backtrack due to our fears into traditional pedagogy. Many of our students are the living embodiment of 21st-century skills such as creativity, critical thinking and problem solving.

Use digital technology to record outdoor learning by documenting what your students are doing and saying. This data can be used for ongoing assessment of your students. It could be the data from which to reflect, learn and grow your outdoor teaching practice. If you need to switch over to teaching online or a hybrid model of both, you could use images from outdoor learning to bridge the transition. See my article in *Green Teacher*'s Summer 2020 issue about using outdoor virtual choice boards for ideas about transitioning between green time and screen time (Baron 2020).

My last point comes back to the beginning about the inquiry process, wherein the final stage is to share your successes. Make sure you do this with your families and system leaders.

This iterative process will likely lead to more questions, problem solving and growth. By following these 10 strategies, your school will have a strong structural base upon which to support the elevation of outdoor learning at your school.

Notes

1. See https://creativestarlearning.co.uk/c/literacy-outdoors/ and https://creativestarlearning.co.uk/c/maths-outdoors/.

2. See "Honouring Water," Assembly of First Nations, www.afn.ca/honoring-water/.

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Building Your Relationship with Nature (for Teachers)

Julie Walker

I hope that you have a park or a natural area near your home or school. If you walk to school, or stop to take a 20-minute walk on your way home, you have the opportunity to build your relationship with nature.

Don't worry too much about plant or tree names. These are, after all, just human constructs. The plants don't care if you get their name right. So how do you learn to identify a tree or plant species without learning the name? Spend time with them.

Pick one tree (or a group of trees), one shrub, and one patch of grass (about the size of your arm span). Visit these places and beings daily (or, at least, weekly). Watch the pollen buds open. Two weeks after that, the leaf buds start to open. Smell the new growth! Witness the leaves unfurling!

Count the leaves on the new growth of the branch. Observe any changes in the bark. What birds or other animals do you notice around there from week to week? Draw or photograph the leaves from various angles, in different lighting. What do you notice? What are you drawn to? Does this reflect your inner artist? Your learning style?

Seek an intimacy with your tree, shrub and grass community. Bring a magnifying glass. Check out the leaves, the bark, the oozing sap. Do the insect visitors change from season to season? What about the aromas? What is the branching pattern of the branches? Are the branches supple or stiff? Is the bark smooth or rough? Is there lichen on the bark?

For the yoga fans, try putting your back against the tree. Now take deep breaths—inhale and count to four, and exhale, counting to four. Look up. Imagine your breath aligning with the respiration of the tree. Close your eyes. Take four more breaths. Take your time.

Next time you are there, put your belly against the tree. Now look up. What animal frequently has this view up the tree? What animal marks are on the tree? Can you see any nests?

Can you see any above-ground roots? Stand against the tree and then walk five steps away from it. Is this how far you think the roots spread? Go back and try again. What is the plant community below the tree? Is it just grass? Are there flowers or shrubs? Is monoculture a healthy natural community? Is there much plant variety?

Once you have this intimacy, you will be able to glance at a tree or plant book and recognize the tree or shrub. Then you will learn the name it is called by. You will then have the certainty that the image in the book and the real McCoy that you have come to know are one and the same.

These are the kinds of questions and explorations Indigenous people of all continents have used to understand their world. As we know, inquiry is key. Experience is intense. Exploring is fun and repeatable. Engagement is survival. This journey aids us in being in the present. The present is where the gifts are.

These are the life skills of calmness, inquiry and learning that we require in order to evolve, to transform and to grow. Like the butterfly, we transform from cocoon to adult. The awe and wonder of life make life rewarding and pleasurable. To explore is the journey.

I invite you to join me with Full Circle Adventures for our workshops and programs. Go ahead and start the journey of re-wilding yourself!

For more information, go to www.fullcircleadventures.com.

Juniperus

Lodgepole pine pulls two needles in pairs long and citrusy

Julie Walker is the owner of and program director for Full Circle Adventures, which has been connecting people to nature for over 20 years. She has a bachelor of physical education degree, with a major in outdoor pursuits, from the University of Calgary.

Check Out the Green Scene at FMPSD

Green Scene

Fort McMurray, our beautiful northern home, is known for many things, but environmental stewardship might not be in the top ten. In the Fort McMurray Public School Division (FMPSD), however, environmental stewardship is certainly in the top three.

Did you know FMPSD is dedicated to environmental stewardship through the efforts of a Green Scene committee? The Green Scene is a collaboration between the board of trustees, our superintendent Jennifer Turner, administration, teachers, parents and, on special occasions, even students. Their collective vision is to encourage environmental education and action in our 16 schools, division and community. This year's committee is made up of 10 members.

Since its inception in 2014, Green Scene has led a variety of divisionwide initiatives and programs. Each school was supplied with Idle-Free Zone signs for parent drop-off areas. Seed funding of $500 was provided for each school to fundraise and install bottle-filling stations. Through this encouragement, 26 bottle-filling stations were installed over the course of three years.

Last summer, the division operations and management (O&M) department installed the final six bottle-filling stations. O&M also negotiated a new waste-pickup contract, and now every school and building has, in addition to a waste dumpster, a paper/cardboard dumpster for recycling.

Our collaboration with environmental organizations such as the Alberta Council for Environmental Education (commonly known as ACEE), Inside Education, the Alberta Emerald Awards, Destination Conservation and EverGreen Schools has resulted in professional development, student workshops and numerous awards. The water crisis has been a focus for our environmental education programming, with guest speakers, and ensuring that students understand the Athabasca River Basin and where our water comes from.

Green Scene shares information on environmental grants. With a total of over $300,000 in grants from organizations such as BP Oil, EcoVoyageur and Shell, teachers and student teams have installed solar panels, aquaponics systems, greenhouses and indoor tower gardens. Schools have reduced waste through beverage container recycling, waste-free lunches, and extensive and varied composting programs.

In collaboration with the local municipality and local businesses, almost all schools now have outdoor school learning gardens and designated outdoor learning spaces. Teachers who serve on the Green Scene were successful in securing $250,000 toward solar panels across the FMPSD, located on the roofs of École McTavish and Westwood Community High School. Student teams are engaged in all parts of the projects: brainstorming, implementing and working with others.

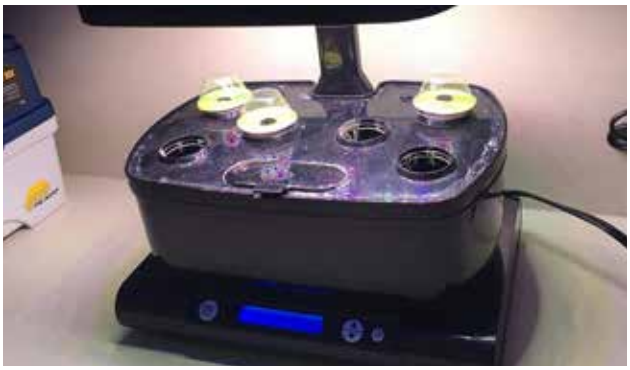
FMPSD educators are passionate innovators who, despite the odds, are always "Doing What's Best for Kids" (our division motto). Students helped with environmental stewardship after the devastating losses of the Horse River fire in 2016. With the support and guidance of the Regional Municipality of Wood Buffalo, Tree Canada (2017) and Alberta Parks (2018), and with funding provided by Chevrolet Canada ($10,000) and Intact Insurance ($4,000), 600 students successfully replanted more than 4,200 trees in the boreal forest. After six years of continued growth and expansion of the Green Scene, the students of FMPSD are prepared for 21st-century problems!

With each step taken, we are ensuring that our students grow into responsible and capable environmental citizens. We're also ensuring that Fort McMurray, Alberta and all of Canada know that the FMPSD is a bustling boomtown of environmental stewardship, in part because of the efforts of the Green Scene.

Find Out More

www.fmpsdschools.ca/Green%20District.php
Twitter: @GreenSceneFMPSD
Green Scene newsletter: www.smore.com/0mbf6-green-scene-fmpsd-june-2020 (look at the bottom for links to previous newsletters highlighting green initiatives)

Reprinted with the Green Scene's permission from Fort McMurray Today, *April 25, 2021, www .fortmcmurraytoday.com/opinion/check-out-the-green-scene-at-fmpsd. Minor changes have been made to fit ATA style.*



FMPSD's Indigenous Students Delighted with Land-Based Learning Opportunities

Kiran Malik-Khan

You could call it the opportunity of a lifetime. And for 13 Fort McMurray Public School Division (FMPSD) Indigenous students, it was! A year in the making, the trip taken by these students and staff on March 18 and 19, 2021, was to Kinosis, about 110 kilometres south of Fort McMurray, for a land-based Indigenous learning camp.

Justin Bourque, owner of Traditional Teachings, has been hosting land-based learning camps for students in the region. He took junior and senior high students to the trapline that has been owned by his family for generations. Students from the FMPSD's First Nations, Inuit and Métis Student Advisory Council engaged in multiple activities, including learning about medicinal plants, cooking bannock, setting snares, building quinzhees (snow shelters) and learning to identify animal tracks.

One Grade 12 student loved the experience. He spoke about his many learnings:

> I learned about tools and pelts that were exchanged between the colonizers and the Indigenous Peoples in the early days. I got to learn how valuable the animal pelts were and how the beavers almost went extinct due to the fashion at that time.

He added,

> I also got to learn how to set up a snare and where to do it, tie certain knots, like the structure knot, and I learned the proper way to set up a fire. We built a snow igloo with my group, and after that we got to learn about the tracks of different types of animals, like the bear, wolf, moose and deer. I will always remember this experience as I apply all these new skills when I'm with my brothers or my cousins out in the woods. I would take this trip again in a heartbeat because it was just a great experience.

Another Grade 12 student agreed:

> During our trip, I know we learnt insightful things that I never would have learnt otherwise. We learnt about the importance of trapping, structure building, fire making, gathering and outdoor food science whilst building bonds with each other. I believe these things are important, and maybe even more important than regular school, because it gives us an opportunity that some of us might not have had to further establish an identity for ourselves.

She expressed her gratitude:

> I'm forever grateful, because some kids have a rough time when they feel like that base of identity is missing. This camp was a wonderful experience that just would not have happened if it weren't for the people who organized it. Thank you for a once-in-a-lifetime opportunity.

Originally planned for last March, the trip was delayed because of the COVID-19 pandemic, and was finally doable under certain health and safety guidelines, with the support of Enbridge.

Annalee Nutter, assistant superintendent of education, accompanied the group. She commented on the importance of the camp for the FMPSD:

> From the pre- and post-camp data, we knew most students had not had the opportunity yet to learn these skills on the land. As a part of reconciliation, we want our Indigenous students to feel like they belong and their culture matters. A connection to the land, and their culture, is empowering. Giving

> them a positive vision we hope will impact them in a way that helps them become even more successful as they move through school and beyond. Our goal is to make land-based learning a regular occurrence through the seasons for all students, not just our Indigenous students, so that we can all learn about how Indigenous people of the past and today live as stewards of the environment.

Angela Woods, the FMPSD's First Nations, Métis and Inuit lead, also accompanied the group. She loved the experience:

> The goal for this and future such trips is to give our Indigenous and non-Indigenous students these opportunities to move forward with building their foundational knowledge in Indigenous culture, traditions and history; to provide a culturally safe and healthy environment for our students; and to move forward with truth and reconciliation.
>
> Opportunities like this give our students a voice and motivation to learn their culture on a deeper level and to be able to share that with their friends, family, staff and students. It ultimately furthers their education.

Speaking of future trips, the FMPSD is moving forward with a hide camp with Brian Bird, in partnership with the Athabasca Tribal Council. During this five-day camp, students will learn about sourcing hides and the 12-step process of tanning, intertwined with Indigenous storytelling and teachings by local Knowledge Keepers and Elders. Future camps with Justin Bourque are also being planned for staff as PD opportunities.

Kiran Malik-Khan is the communications manager for the Fort McMurray Public School Division.

Fire starters

Snare setting

Land-Based Learning: Considering the Fundamentals

Andrea Barnes

As an environmental educator with Alberta Parks and a classroom teacher, I have found that a silver lining of the past year and a half has been the dramatic increase in teachers' interest in and motivation for teaching outdoors. As we move into another school year, I hope that this energy and passion for getting kids outside continues. With this in mind, I've compiled what I think are the five fundamentals of connecting students to the land. But, first, what is land-based learning and why is it important?

It is commonly understood that we take students outside for four main reasons: to enhance their physical and mental well-being, to connect them to nature, to engage them with the broader community and, of course, to teach the curriculum. Land-based learning incorporates all of this but with an important addition—it also lifts Indigenous knowledge of the land and ways of knowing.

Robin Wall Kimmerer (2020) states, "The land is the real teacher. All we need as students is mindfulness." So how do we embrace Kimmerer's words and listen to the land while teaching? It takes a lot of trust and confidence on the part of the teacher to wait for the emergent curriculum to show itself. But it's not simply about finding these inspirational nature moments. Land-based learning also requires planning purposefully, crafting both structured and unstructured activities, and keeping these five fundamental land-based learning practices in mind:

- Have gratitude and practise reciprocity
- Share stories on and from the land
- Learn to observe and record
- Make time for individual reflection
- Allow the land to teach and inspire

Have Gratitude and Practise Reciprocity

This is where it all begins, folks. Take the time to craft your meaningful approach to honour and acknowledge the land you're teaching and learning on. Practise giving gratitude for your time spent in nature and the learning gifts you're receiving. Make space for additional gratitude and reflection at the end of your time in nature, and do this consistently. These rhythms help to build a relationship and an appreciation that is fundamental for nurturing connections with the land.

As an Alberta Parks employee, I've been an advocate for stewardship my entire career. Over the years, we've fixed, repaired, planted, pulled and cleaned up many important natural areas, but we rarely, if ever, considered this as part of a reciprocal relationship. *Reciprocity* is defined as the practice of exchanging things with others for mutual benefit. When we practise reciprocity, we may consider providing a gift to the land (tobacco, native plant seeds, a thoughtful wish) before we do our activity, program or learning task. When we demonstrate this trusting approach, we show that we believe that nature will, in turn, provide us with the gift of rich learning experiences—which it inevitably does. For me, reciprocity is about building a relationship with the land and doing small acts of kindness or filling nature's bucket.

Students contributing their good thoughts for the day into the "wishing well"

Share Stories On and From the Land

Sharing stories is one of the most powerful approaches for making meaningful connections to the land. Stories on and from the land provide provocation, inspiration and knowledge and help focus learning. Telling stories, orally, without the benefit of reading the words, is an even more powerful technique—even magical.

Honing your own oral storytelling abilities will take some time and practice, but stick with it. Here are a few land-based story tips to consider:

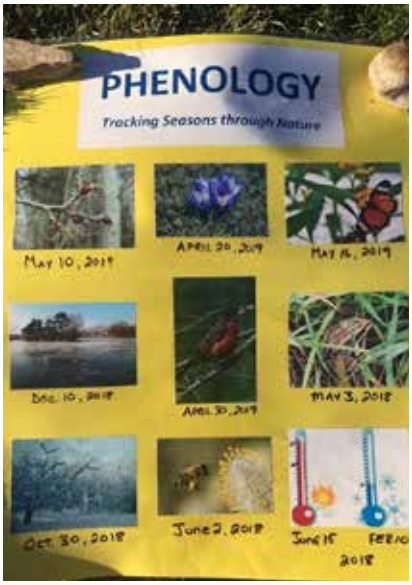
- Build and nurture relationships with the Elders and Knowledge Keepers who have been identified for your area or school. This is, of course, the most ideal and special tip.
- Learn what stories are sacred (to only be told by an Elder) and which are public stories (available for you to share as they are widely and commonly distributed).
- Spend time collecting appropriate land stories and compiling land-based story resources at your school. Share them with your teaching team.
- Share your own stories! Model your connection with nature by telling and retelling your stories of experiences, sightings, awe and wonder.
- Create and tell your own tales about the wonder and drama unfolding on the land. Find inspiration from guidebooks or children's books, and let the stories bubble out of you.

Learn to Observe and Record

With our friends and neighbours, greetings are more meaningful when we address people by their own name. The same goes for the natural world around us. For example, when we know the name of a plant, we might be more likely to notice changes in it (such as budding, flowering or leaves dropping). Knowing its name helps us connect with the stories we might hear about it and perhaps even take more care with it.

Model identifying the flora and fauna in your area by name or learning them together. A great tool for identifying flora and fauna is iNaturalist's Seek app.

Linked with identifying plants and animals is the creation of a nature calendar, or phenological calendar, for your classroom. This is done by observing and recording the significant natural events happening in your area. Consider coming up with your own class watch list. Your list may include animals on migration (the last geese flying south or the first robin in the spring), weather (the first frost or the first thunderstorm), insect observations (the first or last butterfly), or plant-specific events (the first spring crocus or goldenrod gone to seed). The best part about marking these moments in time is that inquiry questions are generated ("Why are the geese later this year?" or "When was the last time we had frost so early?"), stories will unfold, and students will find themselves more motivated to be observant and present during their outdoor time.



Phenological calendar

By taking time to mark and celebrate the passing of time through keen observation skills, your students are practising a deeper and more connected way of knowing and learning on the land. Understanding when and where natural phenomena are happening on the land will also help you relate and properly time the sharing of certain land-based stories.

Make Time for Individual Reflection

For experienced outdoor educators, the sit spot is not a new idea. This simple tool should not be overlooked but, rather, enhanced. Creating meaningful time for reflection through this personal, reflective experience is a fundamental practice in land-based learning. I've heard these sit spots referred to in many ways: special places, important spots, Muir sits, quiet connection or tree sits. Whatever the name, they quickly become places for students to sit quietly, be observant, engage their senses and be mindful.

There are many ways to adapt and change these special spots—through the seasons, in diverse ecosystems, by using various perspectives or isolating certain senses. Consider bringing your students back from their solo sit spots by slowly beating a large hand drum or playing a melodic flute, and encourage them to follow that rhythm, the rhythm of the land, as they return from their solitude.

Solo sit spot

Allow the Land to Teach and Inspire

Trusting that the emergent curriculum will materialize is tricky business. To capitalize on the events that inspire your students, you need to have two teaching techniques at the ready: nature journals and a math tool kit. Literacy and numeracy on the land are everywhere; you just need to be ready to catch them.

Nature journals are not a new phenomenon, but they are often underutilized. Set your journals up in September, and paste resources in them for students to refer to, such as symbols for recording the weather, the Seven Directions Poem, writing props and scientific drawing guides. Take the journals with you, all the time. At any point during a nature outing, students should be able to settle in to draw, write and reflect on their experience. Model how when inspiration strikes and the land speaks to us, we need to seize the day and capture the moment.

Numeracy tasks outdoors require you to be ready for the inquisitive questions that will emerge (either from you or from your students). Along with safety equipment, your backpack should be equipped with a math tool kit. With your tool kit in hand, you're ready to seize the math inspiration at any moment. Measuring items and spaces will inevitably become a staple for many math tasks outdoors; however, math manipulatives can also be collected anywhere, angles can be found, items can be weighed and compared, and complex math equations are ready to be created and solved. The bonus is that you also have the nature journals to capture all this great math land-based learning.

Seven Directions Poem

Use adjectives and adverbs to describe what you see, hear, feel or smell.

Use proper names for the things that you see.

To the north I see . . .
To the east I see . . .
To the south I see . . .
To the west I see . . .
Above me I see . . .
Below me I see . . .
Inside me I feel . . .

To go further with this poem, add personification. Describe what the things you see are doing, feeling, wondering or hoping for.

Math Tool Kit

Large measuring tape (25 metres)

Multiple small measuring tapes (1 metre)

Thermometers

Spring scales

Anemometer (wind meter)

GPS

Heart rate monitor (often a watch)

Clinometer (slope meter)

Summary

Land-based learning is the new and improved environmental education. It has all the best qualities of our favourite education practices, but it is done with more intention and respect for the land itself. It allows us to reconcile some of the negative impacts of colonialism in a small and meaningful way. When we consider the land as the first teacher and build relationships with it, we demonstrate that we value the knowledge and respect with which Indigenous Peoples have engaged with the land for generations.

The five principles outlined here are simple but foundational in their intention. It is not an exhaustive list, and obvious items are missing, such as outdoor nature games and unstructured play. So don't forget to have fun on the land with your students this year. Enjoy your time outside and do so with gratitude, as the land is truly a teaching gift.

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Andrea Barnes is passionate about teaching and learning outdoors. She has been the formal education coordinator for Alberta Parks in Kananaskis Country for over 15 years, where she develops, delivers and evaluates nature and field experiences for students and professional development workshops for teachers. She is also a contractor and a classroom teacher. She worked with an outdoor school in Canmore as a nature immersion curriculum specialist and most recently stepped back into the classroom to teach during the COVID-19 online learning period in the spring of 2020.

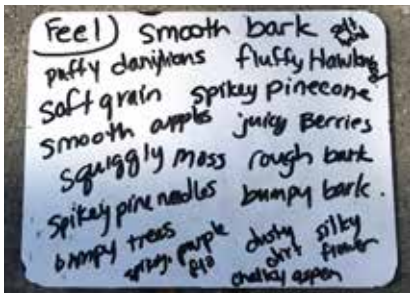
Colours of Edgemont

The land and natural spaces in the community of Edgemont, in northwest Calgary, are a gift to the students, teachers and families who live here. Edgemont School is surrounded by many land-based teaching opportunities, such as Nose Hill Park, ravines and a wetland. As well, part of the natural space that Edgemont School and the Edgemont Community Association are connected to is the Native Species Parkland Project, or as students refer to it, "the slope." When students returned to in-person learning in the fall of 2020, moving learning outdoors helped us distance from the four walls of the classroom and connect with each other and our community.

The Grade 3 teaching team (Ms Dewit, Ms R and Ms Shukin) collaborated to design a series of common experiences for students that focused on building vocabulary and engaging in writing methods through land-based learning. We began by establishing and practising outdoor learning space routines, such as acknowledging that we are entering our outdoor classroom, as many of the spaces we engage with for learning are also connected to students' recess spaces. We observed and shared what engaged learning looks like and sounds like by reflecting on our experiences.

During our local explorations, we shared both Indigenous and non-Indigenous stories with students, teaching reading strategy skills such as visualization and vocabulary development in context. Oral stories, such as the story of Napi and the aspen, drew the students' attention to the natural elements around them and helped them develop land-based literacy. We also read rich mentor texts, such as *From Tree to Sea*, by Shelley Moore Thomas (2019); *My Heart Is a Compass*, by Deborah Marcero (2018); and *Tiny, Perfect Things*, by M H Clark (2018).

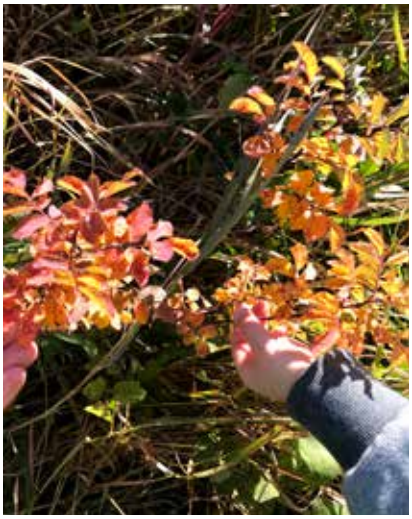
We discussed scientific illustrators and how they observe and document the world around them to communicate through visual information. Outside, students interacted with and observed nature and had conversations about what they saw. They discovered natural patterns and recorded what they noticed and what they wondered about. They slowed down to render and look closely at everything—burdock seeds, aspen bark, the way the wind made the leaves sing, the loveliness of round ladybugs sunning themselves on wolf willow. Through all of these experiences, we were word collectors.



By engaging in learning on the slope multiple times a week, students developed stamina and positive routines for learning outdoors. At the beginning of October, we took a walking field trip to the Edgepark Ravine to explore the colours of our community and build on the relationship of students coming to know the land.

Students worked in small groups with an adult guide. They were excited to explore the various natural spaces in the ravine. The groups soon found sit spots, where students quietly observed what they saw, heard, felt and thought through InfoDoodling and capturing the moment using keywords and pictures in a sense circle.

Going to the ravine helped students connect to each other and to the place. As well, the experience gave them another context for the vocabulary they had been exploring and building on the slope and in the classroom. Students also shared their individual experiences, such as tasting fleshy rosehips or finding large sandstone rocks in the switchgrass.



Back in the classroom, the students took a closer look at colourful autumn photos taken at the ravine and generated descriptive colour and movement words to use in their writing.

Class-Generated Colour Words

Yellow
mustard yellow, golden, gold, bright yellow, sunny yellow, banana, radiant, sunset, lemon, orangey-yellow, brown-yellow, sunflower, sparkling yellow, pastel yellow, pumpkin yellow, cheesy-yellow, peachy

Orange
sunset orange, coral, orangey-red, pumpkin, mandarin, tangerine, leavy, sunny orange, peach, orange crush, pastel orange, pizza

Red
apple red, crimson, maroon, scarlet, ketchup, rose red, pinkish red, strawberry, cherry, pepperoni, Iron Man, blood-red, pale red, tea red, garnet, tomato red, blush, ruby, barn, watermelon, heart, peach, dark, Christmas red, Spider-Man, bright red, volcano, pizza sauce, medical

Green
grassy green, apple green, Infinity Stone, balloon green, kiwi, grape, mint, lime, green bean, leafy, evergreen tree, avocado, broccoli, brussels sprouts, green onion, camouflage, slime green, Christmas green, happy green, emerald, cucumber

Brown
chocolate brown, hazelnut, muddy brown, cinnamon, rusty, rustic, caramel, pale brown, milky brown, pretzel brown, hot chocolate, coffee, moose, brownie, coconut, bread crust, dirt, cola, Nutella, grizzly

Class-Generated Movement Words

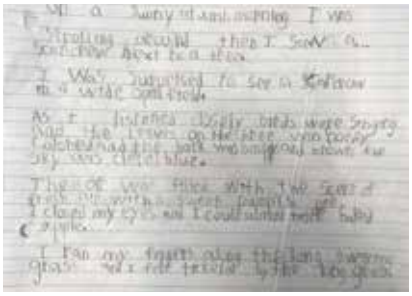
Wild Grasses
swaying, wiggling, swing, trotting side to side, dancing

Trees/Branches
bobbing, falling, plummeting, crashing, dancing, guarding, standing

Clouds
floating, drifting, strolling, crying, lumbering, dancing, twirling, swirling

Leaves
racing, trudged, floating, dashed, bolted, dancing, falling, zigzag, diving, laying, swirling, twirling, plummeting, raining, dashing, crashing

It was exciting to see the students' experiences and new vocabulary transfer to their writing!



Students respectfully collected biofacts to research the connection between the items and our science exploration of rocks and minerals.

Collaborating with our fine arts teacher, Ms Dickson, students selected a reference photo from Edgepark Ravine for inspiration. They completed a colour study by analyzing the various shades and tones in the photo. By blending and layering pencil crayon, students tried to re-create the key colours for their weaving plan.

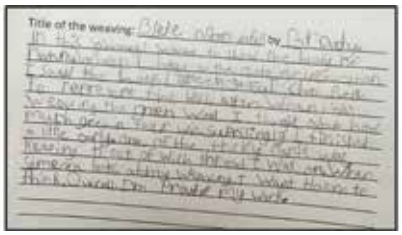
Throughout the weaving process, students made colour, texture and design choices to best represent the Edgepark Ravine. They captured the colours of the community and the season beautifully!

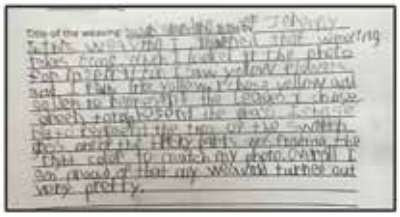
Brown-eyed Susan

Canadian thistle

Purple aster

Reflecting on their experiences and applying the vocabulary they recursively developed, students wrote artist's statements for their weaving. They were excited to share their accomplishments and felt proud of the amazing work they did!





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Caring for Our Watersheds

Cody Field

In 2007, Nutrien (then Agrium) launched an education program for Grades 7–12 students called Caring for Our Watersheds (CFW). The program aims to turn student ideas into environmental solutions. Students submit a written proposal that answers the question, What can you do to improve your watershed? They research their local watershed, identify an environmental concern and devise one solution that can realistically be implemented in their community.

Working in a group of up to four, students explain their unique idea in a written proposal, using graphics, models, pictures or videos to supplement their idea and reinforce important concepts. This is not an essay; it is a proposal for a solution that would make a real difference in their local watershed. Students then submit their proposal online for review by local experts.

Community judges select the top 10 entries based on the following criteria: innovation, environmental potential, comprehensive scope and communication, budget, practicality, and visuals. The finalists then compete in a verbal competition in which they have five minutes to pitch their solution to a new panel of community judges. The prize for first place is $1,000, along with a matching cash prize for the school or club. The 10 finalists and their schools or clubs all receive a cash prize, and schools or clubs also receive $100 for every 10 student proposals submitted.

Southern Alberta student and contest winner Kaylee Nishizawa says,

> My project involved educating homeowners of the benefits of mulch for our environment and ecosystem. The Caring for Our Watersheds program enables students to use their creativity to establish solutions that would otherwise be unheard and unseen. It helps students realize the value of community contribution and the significant impact each individual can have. Without a doubt, Caring for Our Watersheds impacts our environment but, equally as important, also the lives of its participants.

The key to the CFW program is what happens after the competition. Nutrien provides implementation funding to help turn students' ideas into real solutions that help improve our land, water and air. The projects that are implemented include ideas from finalists and non-finalists. If a solution is realistic, it will be considered for implementation. To date, more than 30,000 students have participated in the program, and over 460 student-led action projects have been implemented around the world, with support from local community partners.

CFW offers students an opportunity to consult with qualified community members who are supportive of and knowledgeable about the CFW

program and local environmental issues. Teachers, parents, government and business come together to support students in their quest to improve their local watershed. This program is a collaborative effort of nearly 150 community partners that deliver watershed information to youth and support student-led action projects by providing mentorship and subject-matter expertise.

The CFW program, which is free, was developed in collaboration with teachers, conservationists and industry professionals to complement curriculum. However, CFW is more than just a classroom assignment. It teaches students real-life skills, including researching, planning, budgeting, and written and verbal communication. Most important, it encourages students to take action in their communities and shows them that they can make a difference for the environment. Young minds often hold the key to amazing innovations that can protect and improve our watersheds and, subsequently, our planet.

CFW is an international program that includes 10 contests across Canada (Central Alberta, Southern Alberta, Saskatchewan, Manitoba and Ontario); the United States (Colorado, Ohio, California and Chesapeake Bay); and Argentina (San Antonio de Areco area). It has supplemented and enhanced school curricula in many regions. Rochelle Jacks, a teacher at Mira Loma High School in Sacramento, California, states,

> The CFW competition has been an effective way to deepen student understanding of the local and global environmental issues we face, and the complexity involved in addressing them. It empowers students to take action in a way that is both feasible and measurable, providing a unique opportunity to develop engineering, service learning and project management skills. The proposal allows for a large degree of student choice both in the topic and means of addressing the issue, so they are authentically engaged in the research and planning of their project. That level of ownership is fundamental to a meaningful learning experience.

In 2019, the Canadian Wildlife Federation honoured Nutrien as the recipient of its Youth Mentor Award for the CFW program. This award recognizes an individual or group that creates, presents or encourages conservation, habitat or wildlife programs for Canadian youth.

"It is a true honour to be recognized by a revered environmental organization like the Canadian Wildlife Federation and to be part of a program that is driving positive change in our local watersheds," said Chloe Sprecker, Nutrien's education program coordinator. "Thanks to the knowledge and effort of our community partners, we're reaching more students, receiving more entries and, most importantly, these students are implementing their environmental solutions to protect and improve their local watershed."

For more information about CFW, visit https://caringforourwatersheds.com. Details about the Alberta contests are available at https://caringforourwatersheds.com/canada/alberta/contests/.

Cody Field is the Southern Alberta program advisor for Caring for Our Watersheds.

Interviews with Alberta Educators

Daily Outdoor Exploration in a Kindergarten Class: Abi Henneberry

Alison Katzko

Abi Henneberry teaches full-day kindergarten at Lois E Hole Elementary School, in St Albert, and has also taught K–6 nature education. She loves working with young children and inspiring awareness of the values GEOEC espouses.

Getting Students Outside Every Day

Abi takes her young students outside for a walk of at least one kilometre every morning. "Our longest walk this year has been more than 4.7 kilometres. By the end of the year, conservatively, we will have walked the distance from St Albert to Calgary," she told me.

They go outside every day, even in the winter. Abi emphasized that students can still get outside for exercise and fresh air during Alberta's frigid winters. Proper clothing, communication with parents, and education for staff and students about safety in low temperatures are all key factors for building students' awareness and resilience in our climate. Even with temperatures between −20°C and −30°C, she still tries to get some quick time outdoors. For example, one day, instead of taking a walk in the community, Abi and her students stayed in the schoolyard: "We did yoga poses that day in the snow, took pictures, then raced around to keep our circulation going and returned indoors before anyone got too chilled." Abi believes that children need to be climate aware and prepared for extreme weather, no matter where they live—but especially here in the north.

As for the impact of the COVID-19 global pandemic, Abi has found that getting outside "is the best way for children to release energy safely and take a break from wearing their masks."

Planning for the Walks and Building Curriculum into Outdoor Time

Abi explained that she bases her walking routes on "what we're learning and how we're feeling each day." She said,

> My students are full-day attendees, so I like to bring them

> inside to get sorted before heading out for an adventure. We come in, get their things put away, make washroom trips and clothing adjustments, take attendance, and discuss our route and plan for the morning. We also do a feelings check-in to address our general energy level and attitude as a group. We address questions and concerns, and then proceed to the route.

This routine helps, as her students start the day by being outside for at least an hour. They often spend even more time outside: "I do increase that time because we are doing work while outside. We are working on numbers. We are identifying letters. We are doing science. We're working on cooperating and following rules. We work through games that enhance fitness." Abi's students are engaging in a lot of curriculum during that time outside!

As for how she plans for this curriculum content, she said,

> I plan differently for different purposes. I start with getting kids outside and finding what is challenging and interesting—knowing that we can connect anything to a curricular outcome. I take kids outside and utilize conscientious reverse design. I know *that* was math, and *that* was language arts, and *that's* a science lesson. I know I'm not going to be able to meet every single element of the curriculum at once, whether inside or out. It's a combination of both, with a heavy focus on learning in the outdoor environment, through which I believe we achieve a rich and valid curricular balance.

Bringing Meaning to Students' Learning and Connecting Learning to the Real World

Abi noted that because of this time outdoors, "the curriculum has more depth and meaning, because they can take it beyond the activities and work in the classroom." As a kindergarten teacher, she has a great deal of passion for bringing meaning to what she is teaching. "It doesn't do me any good to teach the alphabet, numbers or reading without meaningful context in the real, tangible world," she told me.

Abi has a wealth of ideas for connecting her young students to meaningful learning. She sees taking students outside as a way to create meaningful experiences to build connections: "That's why going outside to learn in a variety of environments is so important. It identifies purpose, fosters understanding and informs practice in our world."

Abi shared how going outside can become a learning experience:

> An example of environmental math connection is identifying the numbers on a variety of houses. A lot of students live near the school, so knowing the numbers on the houses has a real-world, practical application, as well as reinforces number recognition. It is inspiring to watch children make new connections between curricular elements and real-world experiences. These "aha!" moments are valuable for fostering interest in lifelong learning from a young age. Meaning often comes from such connections, and witnessing the process unfold excites me as an educator.

She can see in students, as well as in adults, how excitement builds and grows "when people gain a new perspective, or change their

perspective. Then they themselves are excited about what they've observed in and learned about their world."

Engaging in hands-on experiences is key. "I think learning is most meaningful when you take it into their immediate world," Abi said. "When children walk by things they can see and touch at eye level, they experience them more personally and fully." She noted that "children are usually driven to destinations and pass unknowingly by interesting features near their homes." As an example, she mentioned a neighbourhood ravine: "Now that they get to walk back and explore the actual wooded space, I'm getting stories from parents about going for family walks, when the kids show and inform them about what we've seen in class." Abi recognizes this as "an expanding knowledge of community for the families living there."

Again, meaningful learning and real-world connections can be connected to the curriculum: Getting out in the community and making it real at the children's level challenges us to observe and problem solve, which is part of our curriculum. For example, we've run into situations on our first excursions like the one in the children's song "Going on a Bear Hunt": "We can't go over it, we can't go through it, we'll have to go under it." This has led the children to think about the matter at hand and progress accordingly, using their skills to keep the adventure on track. It's being aware of the curriculum and how it connects to what we're doing outside. We often look for letters in the environment and discuss how "the tree is formed in an upside-down A" or "that peak of the roof has an A or looks like an upside-down V." Again, it's about getting them to look at things and try to see things that they might otherwise overlook. It is also giving them the opportunity to practise and explore. This is building a lifestyle where their learning is part of their everyday lives.

Learning to Adapt and Work Together

Abi said, "When kids go outside, they work together and individually to adapt to their surroundings and situations. They often complain when they first go outside that it's too cold or that they don't like the wind, but they soon build resilience through creative problem solving, using their imaginations and working together, all of which are key elements of our schoolwide character development program."

She shared an example:

> On one occasion, a child was having fun running outside, ran right into a tree and immediately succumbed to tears. We first checked for injuries, then talked about how it happened, how he felt, and empathized with him. Next, we brainstormed about how this happened in the first place and what could be done in the future to prevent it from occurring again. Through these types of experiences, children are able to grow and adapt. Students become more resilient, and they are then able to explore with more confidence. These situations also provide opportunities to learn and practise empathy and respect. I get excited when I see examples in a class grouping of these extremely important qualities building amongst students.

This has been especially important during COVID-19. As Abi said, "We are finding that, currently, kids in kindergarten—and, really, all ages—are missing those opportunities to develop social skills. Right now, the uncertainty surrounding teams, clubs and group lessons in person is taking a huge toll on this aspect of children's social development. Any chance to be together in a safe environment and minimize health risks is welcome!"

How Spontaneous Learning Creates Engagement and the Importance of Going with the Moment

"I love when spontaneous learning happens," Abi told me.

She emphasized that this happens "all the time when you take students outside. Those experiences just arise as you explore, and you must take advantage of them to further learning and practice."

She shared a story from her class:

> We have delighted in discovering slugs underneath oak leaves, muskrats surfacing in local ponds and swimming to shore, and migrating geese establishing nesting grounds. Once, we discovered very active, fearless voles in the green space surrounding a local storm pond. They had created holes and tunnels in the grasses we had passed many times, and they were jumping everywhere. This was a tremendous opportunity for children to appreciate their place as the visitors in another species' world.

As an educator, Abi finds that going with the moment in a hands-on way is key to creating meaning: "Going with the moment, especially now with COVID and our need to adapt quickly—allowing activities to evolve spontaneously outdoors—just keeps it real."

Building Community Connections and Empathy in Students

Taking students outdoors and into the community helps them build connections to the community and develop empathy for the community members.

As an example, Abi shared how learning about walking on the sidewalk, versus treading on community members' lawns, develops an awareness and empathy for others in her kindergarten students. They become aware that if they walk on the sidewalk, they should be careful to respect the time and effort the neighbourhood people have spent keeping that space clean and safe. For example, "You never know if someone who shovelled that walk after a big snow was a person who would have a hard time re-shovelling."

The benefits are reciprocal: "People in the community see the children as active learners in their neighbourhood. It builds community connections between citizens of all ages."

Abi told me a story about a city employee surveying street construction who agreeably stopped his work to explain to the children why he was taking pictures of the road. When the kids saw him again on their next day's walk, they yelled, "Hi, Toby!" Abi related, "Toby was thrilled to be a celebrity for a moment, as the kids were so excited to see him! In moments like this, we are able to connect safely with workers in our community, and they start learning about traffic safety and crossing streets. We're practising good awareness and life skills while also getting exercise."

Finding a Connection to Nature in an Urban Setting

Although Abi teaches in an urban environment, she stresses that natural elements and spaces can be found anywhere. A lot of development has been taking place in the immediate area surrounding Abi's school. This has helped direct meaningful, thought-provoking discussions with her class. She asks her students questions such as, "How do you think building all these new roads, houses and stores is affecting the birds and other animals in our area who depend on the land for survival?" Storm ponds

are being built, and the students can see how that is impacting the neighbourhood and the wildlife, as well as mitigating damage to the environment in other ways.

As far as engaging with city spaces, Abi stressed that "there's not always as much nature to observe as you would like, but you can create nature spaces. You can have planted pots instead of a garden in the ground. You can grow vegetables and plants in containers—building up, not out. Your local permaculture and horticultural societies will be able to support you."

She shared, "My passion is the outdoors. One of my suggestions is to look at what you have, not what you don't have. The book *Be a City Nature Detective*, by Peggy Kochanoff (2018), talks about lichen and moss and how it will grow in the sidewalk spaces. It just shows that nature tries to grow everywhere, so getting outside—you will be able to find that connection."

Fostering Changing Perspectives

Time spent outside with students creating these newfound outlooks often deepens their understanding of local and global concerns. As Abi said, "Everything we learn in our daily outdoor time can be extrapolated to some practice at the greater global level."

Abi related the following story:

> There is a park near us called Coal Mine Park. It was just a vacant lot full of deadfall and construction trash for months. A local community teacher-activist spearheaded building a pollinator garden and set of interpretive trails in this space, touting the project as a boon for the school community nearby. The city met with school staff for input, and now we have a beautiful forested natural space within walking distance for all age groups at our school. It is a little oasis with a gravel path, signage, a few seats and a lot of space to explore. Pileated woodpeckers, rabbits, small rodents and evidence of deer abound. The same teacher-activist advised our school community on the construction of another pollinator garden and community food garden on our school property. We have now contributed to creating a corridor for pollinators in the community, and many school families are on board with extending the idea in their own growing spaces at home. This is the ripple effect at its best!

Coal Mine Park provided another lesson in perspective, awareness and empathy for Abi's kindergarten class:

> I remember hearing and wanting to expand on the saying, "You don't know how someone else truly feels until you've walked a mile in their moccasins." The saying specifically avoids the words "in someone else's shoes," because moccasins have a soft bottom and you feel everything beneath your feet more intensely in them than in hard-soled shoes.
>
> One day, before we left the classroom for our morning walk, I asked the students to bang on the bottom of their shoes to see what they felt. I asked them, "Can you feel much?" Of course, the students could not feel much through the thick soles of their shoes. The class then travelled to the pathway through Coal Mine Park. I invited the children to "take off one of your shoes and try walking with one foot in your shoe and the other just in your sock." The children quickly discovered that their two feet felt very different—one felt every detail on the exposed path, while the other was dulled to the details of the surface, due to the "protection" of the sole of the shoe. The children discovered that walking over the leaves on the path was a lot more comfortable than walking on the small rocks.
>
> This led to a conversation about our own sensitivity to our environment and how we perceive our surroundings through our five senses, particularly touch, as in this case. We then talked about the lifestyle and clothing of Indigenous Peoples, who likely walked this very ground, long before our families came to St Albert. I asked the class to think about the first people who walked here. "Do you think they had shoes like yours? They felt the ground underneath them through the soles of very different footwear. They knew

> their world in a very different way because they were closer to it." This spawned even further discussion about how we see and treat our surroundings today, and how we can change our perspective to be more responsible, aware citizens.

It is evident that experiences like these have support from parents and the community. Abi shared, "Even though the kids were sent home with filthy feet by the end of that day, I never heard a complaint from the parents. This was because the kids themselves came home excited, with the positive perspective and understanding of a connection to nature and a sense of history."

Dealing with the Challenges

The connection to learning built through combining curriculum and time in natural spaces is key to Abi's strength as an educator. However, that doesn't mean there aren't any challenges.

Abi said, "For myself, the challenge in getting children outdoors is within my comfort zone, and I believe that with the right support, it is completely surmountable in any school setting. I think people interested in pursuing more outdoor programming need to begin with bite-size chunks in their comfort zones, and support from others who have done it. Outdoor education extends beyond the focus on physical activity outside."

Many classroom teachers struggle to justify time away from the classroom—the setting in which they are accustomed to teaching and achieving academic goals. Abi suggests that these educators consider, "What are things you now do indoors that you could do outdoors?"

For example, a teacher needed to complete a poetry unit with her students and wondered if they could somehow connect this with an outdoor adventure. Abi and the teacher worked together and decided to take a walk with the class to observe and record characteristics of two different items along the way (rock/tree, puddle/cloud, bird/dog, pavement/grass) as inspiration for their writing. The students then used their recordings to write relevant diamante poems. Not only did they need to rely on their observations but they also had to understand the use of language (nouns, adjectives, verbs, participles, adverbs) in order to complete the poem successfully. Finally, the students were invited to illustrate their two subjects and display their combined efforts for others to enjoy. Abi said, "This experience gave the teacher formative and summative assessment of a number of curricular elements, and students made new connections with their immediate environment near the school. It was a win-win for all!"

Abi offered the following final thoughts:

> In making space for outdoor time that's connected to learning, teachers can see the relation of many different things to the curriculum. I can remember somebody saying to me in a casual conversation years ago, "Outside—that's where we all came from. No matter how high you build a skyscraper or thick you build your walls, that is where we come from. If you go out there to learn, you acknowledge the very roots of our existence. You can't deny that the outdoors sustains us."
>
> The one thing I would be sure to take with me to a far-off land would be the footwear that would enable me to navigate new terrain safely. I thought about saying that I would put my camera first, but without footwear to safely traverse my surroundings, I wouldn't have a way to kinesthetically experience what I want to record visually. My hope is that my mind's eye would record and recall the experiences through which my feet have carried me, so I may share my story authentically.

Reference

Kochanoff, P. 2018. *Be a City Nature Detective: Solving the Mysteries of How Plants and Animals Survive in the Urban Jungle*. Halifax, NS: Nimbus.

Connections thanks Abi for sharing her experiences teaching kindergarten and welcomes her to the GEOEC executive as codirector of publications.

2021 Grosvenor Teacher Fellow Andrea Smola

Alison Katzko

Andrea Smola

GEOEC congratulates Andrea Smola, a kindergarten and Grade 1 teacher at Avonmore School, in Edmonton, who has been selected as a 2021 Grosvenor Teacher Fellow.

The Grosvenor Teacher Fellowship is a PD opportunity for educators that is made possible by a partnership between Lindblad Expeditions and the National Geographic Society. When it is safe to travel, Andrea will undertake a field-based experience on a Lindblad Expeditions voyage, with the goal of bringing new geographic awareness into her classroom and community and supporting National Geographic's education initiatives. For more information on the fellowship, go to www.nationalgeographic.org/education/professional-development/grosvenor-teacher-fellows/.

GEOEC is grateful for the opportunity to interview Andrea for *Connections*.

Please share where you teach.

Over the last three years, I have been teaching at Elmwood School. This school is a science inquiry school with Edmonton Public. It is unique in the Edmonton Public Schools system because it uses both the inquiry model and concept-based model as approaches to learning with a science focus.

As I am a young teacher, I had to move from that school because of placements. I happily landed at Avonmore School, which is a community school. I have been able to bring my experience and passion for science there. At Elmwood, I taught a combined Grade 1/2. I have been assigned kindergarten and Grade 1 at Avonmore. It has been an interesting experience transitioning into a younger grade, but I am enjoying the learning.

In general, what are you passionate about as a teacher?

I love this question! When I moved to Edmonton (I am from Ontario), I went to Concordia for my after-degree program. During that time, I started working at the John Janzen Nature Centre. I really did build a passion for the natural world and shared my knowledge of it with people who were kind of in awe of nature. I was able to share amazing facts about plants, such as how they can move and how they can attack other plants. Something I am really passionate about is the natural world and learning about the connections between it and how we affect it, as well as depend on it so much. It's surprising how we really think we are the masters of it all as

humans! Truly sharing this knowledge with students, while promoting understanding that we are all connected, increases our ability to help students realize that what we do really does connect to the natural world. Nature can't tell us to stop harming our world, but we are the ones who need to recognize our impact and make changes.

I am also passionate about plants, baking and hockey! I love teamwork and collaboration! It is wonderful to connect with my colleagues in the teaching profession, especially right now, as we emerge from Alberta's second COVID lockdown. In this, my chosen profession, I have built lifelong partnerships in education, which is what National Geographic has done for me as well.

In my classroom, it comes down to relationships first. The reason I wanted to become a teacher was because I wanted to support students to grow into being themselves. I believe that students become who they are through their experiences. My goal as a teacher is to support their learning and inspire their passion and curiosity. I provide them with the experience to do that!

You mentioned how National Geographic has supported you. Can you share your experiences with National Geographic?

A colleague at Elmwood had asked me to become a National Geographic certified educator in 2018. Through the last two years, I have completed about four or five more courses as well. One of my favourite courses was the geo inquiry process course, which showed me you can approach a concept in different ways. It was during the pandemic, but in Grade 1 and 2 we decided to do a project based on how accessible our playground was. It was tying into building and making models of playgrounds. It had connections to our senses and how some individuals don't have full command of all their senses, so how would they approach a playground? If someone can't see or hear, how would they know what's available? We looked at how something as simple as losing your senses or not having full access to your senses means that the world is going to be totally different for you. Most of my students had their senses, but we did have a few students in our school who were in wheelchairs. We decided to go through and check some boxes: "Is this accessible, and if not, what do we do to create an accessible playground?" We wanted to know who we could talk to and should we have a plan.

The project got cancelled in a way because of the pandemic, but we still had students asking the questions and expressing concerns for their friends without all their senses. Unfortunately, we didn't get to follow through with all of the things we wanted to do. For example, the Rick Hansen Foundation could have worked to bring a more accessible playground to our school community.

I do remember the overall feeling my students had that they can make a difference, and it was huge! I called them the Change Makers, and they loved it! The kids were making changes and starting to build and expand their personalities through the experience.

Taking that up, you are evidently a very passionate teacher. Are there any meaningful projects or lesson approaches that you can share with us?

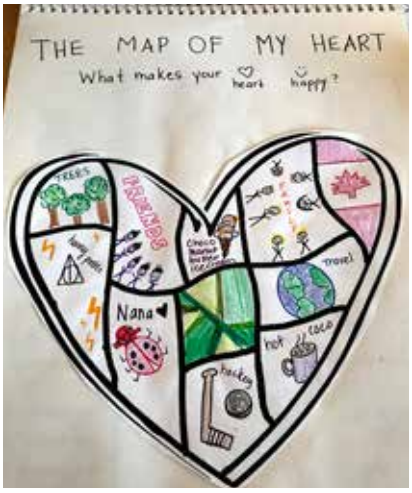
A few years ago, we took part in the Junior Water Walkers program.

This project was developed by Peter Cameron, but he grew it from the original initiative that was created by Ojibwe Elder Nokomis Sue, who walked with her group, the Water Walkers, to teach people about the environmental and spiritual importance of water within our communities. Here is a link to a website with more information if you are interested: https://sites.google.com/tbcschools.ca/juniorwaterwalkers. The initiative is to learn, adopt, protect and walk to take care of the water around you.

We took on the role of Water Walkers with my Grade 2s, and we adopted a part of the North Saskatchewan River. We learned about our watersheds through a local organization called Swim Drink Fish. We did a whole-school river valley walk and also created a river community in our classroom. This was my capstone project for National Geographic certification, too.

Peter Cameron (the individual who started this initiative) was a National Geographic Grosvenor Teacher Fellow, and so I found out about this fellowship through our own initiative. When I was reading through his blog and website, I found out that he was a fellow and this was his deliverable from the expedition, and it caught my attention to apply.

Once I took the National Geographic certification course, that was when doors continued to open for myself and students, because I kept finding so many things that could be integrated into my classroom.



Can you talk more about the National Geographic Grosvenor Teacher Fellowship and what it entails? How can other educators sign up?

You don't have to be a certified educator with National Geographic, but you need to be in an educator role. It's a once-in-a-lifetime opportunity where educators get to go and experience some remote place in the world. Some examples of places that other fellows have gone are Antarctica, the Arctic or Galápagos Islands.

The point of the experience is for educators to gain first-hand experience and knowledge of the interconnectedness of the human world and natural world. Also, how can we integrate that into our teaching in an effort to create students who are globally minded and who are empowered to take action and make change. The program also supports teachers to become experts, to grow and develop and make their teaching practice better for their students. They also want teachers to become leaders in education and ambassadors in their local communities. The point, I would say, is for the teachers to bring the experiences back to their classrooms. For example, telling your students about no littering and then showing them that while you were in the Antarctic and Galápagos, you saw garbage and litter, brings your point home. Showing your students the kind of animals that live in this area and this environment, and asking the questions about why would this piece of garbage be here, when around me is only the natural world and nothing to make this garbage. The program really supports teachers in bringing these projects back to their classrooms so that the students can feel a part of something special.

I was supposed to go to the Antarctic in November 2020, but the pandemic shifted things, of course. We are hoping by the fall of 2021 we will have a better idea of timelines when we can go explore again.

How many people are selected for this opportunity?

Educators from Canada, United States and Puerto Rico can apply. It's not the whole world, but still a lot of people. I believe there were hundreds of applicants, and 50 were selected from North America.

There are roughly five Canadians this year. I was beyond excited to be selected and to share with others!

Is there a lesson or an approach that you recommend starting at or beginning?

Honestly, as I teach Division I, I would have to say books. *The Water Walker*, by Joanne Robertson (2017) is amazing.

I was at the Royal Alberta Museum, and I found this book called *My Map Book*, by Sara Fanelli (2001), and it created a project that my Grade 1 and 2 students completed. It connected with a National Geographic course called Mapping as a Visualization Tool. In the book, for example, was a Map of My Day and Map of My Heart that I created with my students. We created our own map book and added things throughout the year and talked about different celebrations we all have. We did a map of colours, because we were learning about colours, then shapes, etc. All this came from that book, and the project was all year.

As a young teacher, I say invest in books, because kids love stories and learn from stories. They love when you, as a teacher, storytell. If you can find the right book and it launches you into a project, it will guide you the whole way through. The book will become the teacher in a sense.

Is there one resource, skill or approach you might take with you on an expedition or your journey? Is there something you are excited to maybe bring back with you?

I really love to journal and sketch when I travel—mostly plants and the natural world. I really want to become a storyteller for my students and record as much as I can through pictures and videos. Hopefully, I can adapt that in a more accessible way for my students, like a movie or short videos, a slide show, or a blog. I really want real-time updates to my class (I know it is tough with Wi-Fi and streaming, etc, but that is what I would really like to have). I haven't fully decided what program to use yet, but I will be bringing my pen and notebook, because that is my go-to. I have already picked out my notebook—I am a teacher, after all!

Any last thoughts or comments?

The reason why I really wanted to become a teacher is because I really believe that students become who they are through their experiences. I found this quote while I was completing my after degree, and it really speaks to my teaching philosophy: "The ultimate aim of education is to enable individuals to become the architects of their own education and through that process to continually reinvent themselves" (Eisner 2002). Through those experiences, I hope to bring my students hope in developing who they are, finding their passions and satisfying their curiosities. That quote fits my philosophy very well.

Social Media Resources

Andrea recommends the following social media accounts for ideas to use with students.

Instagram
Outdoor Education Collective (@outdooreducationcollective)

Twitter
thecedarstream (@thecedarstream)
Take Me Outside (@takemeoutside)
Nat Geo Education (@natgeoeducation)
Peter Cameron (@petectweets)

Follow Andrea on Twitter (@apsmola) and Instagram (@apsmola and @thedandiclassroom).

References

Eisner, E W. 2002. *The Arts and the Creation of Mind*. New Haven, Conn: Yale University Press.

Fanelli, S. 2001. *My Map Book*. New York: HarperCollins.

Robertson, J. 2017. *The Water Walker*. Toronto: Second Story Press.

Connections *thanks Andrea for taking the time to talk with us and wishes her the best in her field-based experience as a Grosvenor Teacher Fellow.*

A K–6 Nature-Based Learning Program: Ryan Lemphers and Graham Campbell

Alison Katzko

In this in-depth interview, Ryan Lemphers and Graham Campbell, of Foothills School Division, share their journey of creating a new nature-based program for the division. For three years, they have been teaching with the nature-based teaching philosophy and have seen its dramatic positive impact on students. By engaging in conversation with their school district about the positive impact of outdoor learning environments on academic achievement, they have been able to start a nature-based program that will debut in the 2021/22 school year. They also share some wisdom and what they have found along the way to help other educators who are interested in this approach to teaching.

Thank you both for joining me today. I am very excited to hear about your program that you are launching in the 2021–2022 school year! Can you start with sharing your journey of creating a nature-based program?

RYAN

We both began with an embedded extracurricular club for outdoor education. Once we discovered how much the students were engaged, we wanted to challenge ourselves to see if we could turn it into something more academic. We asked the question, What can we do to impact academics through nature-based instruction? That started a whole journalling process. I did that for a number of years, where I developed/improved the process of having that academic impact through journalling about the outdoors.

As I was working on this, Foothills School Division trustees had an innovations grant I applied for but did not get. Then, three of us (Graham Campbell, Bobby Mappin and myself, Ryan Lemphers) put together a proposal and got it approved. We had a chance to have some release time, to collaborate, to buy equipment—and some planning time. That year there were a lot of expectations to collect data and show we were doing good work with the money. That gave us the chance to collect evidence and data to show academic learning. Through compiling that evidence, we realized we wanted to continue—it was feasible, and we wanted to scale it up.

We started the process of writing a proposal for an alternative program within the Foothills School Division. It was a lengthy process of documentation that the school division required. We also did extensive studies in

community engagement and feedback. After 18 months of writing over 100 pages and presenting many times, it was approved on the 10th of February, 2021.

It sounds like the process required you to be really passionate, which tells me you know that it is making a difference with kids' learning! Can you tell me where the new program will be and what you envision at that school?

GRAHAM
École Percy Pegler School, in Okotoks, will be starting a nature-based learning program in September 2021. This program will use nature, outdoors and the community to immerse students in the program of studies. Specifically, students from kindergarten through Grade 6 will spend at least two days each week learning outdoors in their community all year long. School principal Dinah Van Donzel and vice-principal Faye Holt will be instrumental in implementing this program.

RYAN
This school currently has English and French programs, and now will also have a nature-based education program. Students will be immersed in nature education but also be able to attend areas such as music and library as part of the wider school. They will also have opportunities to have interventions and supports (such as occupational therapy, speech and focused reading support).

We accept students from kindergarten to Grade 6. We will also include children from outside our district (so someone could attend from Calgary or areas around Okotoks).

We are eager to spread the word of this program throughout our region, in the hopes that it may inspire other educators to infuse nature and the outdoors into their teaching. We strongly believe (and are backed by an extensive field of research) that this style of learning is good for all students.

Many of our readers are people starting out on this journey. You mentioned at the beginning that you were able to get some equipment. Can you tell us what materials you suggest for running an outdoor program in an elementary school?

GRAHAM
When we received the $16,000 grant, we purchased all sorts of things (like trail cameras, binoculars and measuring tapes). You name it, we bought it! We then discovered as we used things that you really don't need all that stuff. What you truly need is a journal, a bum pad and a pencil.

It isn't about all the stuff—which is appealing. I do know that teachers like having materials; however, it truly requires creativity, which you can't buy. You need a few basic things and need to try and try again—and keep trying.

It was really interesting to see that all the fancy stuff really is not *it.* What turned out to be most important is your mindset, creativity and willingness to try something new. If you have that, you really don't need anything else.

RYAN
It is having the eyes to see the world around you and the connections within that world. Honestly, we spent a thousand dollars on binoculars, and they are really heavy! They are great for the time we pull them out, but we don't do that all the time.

GRAHAM
Less is more. When people think of outdoor education, they think of bikes, snowshoes, knives—or whatever it is. They are not the heart of what this is. It is careful

observations and the learning that takes place.

What a wonderful answer, because that makes it possible for anyone willing to start tomorrow! Can you share a story about how you have used creativity, and how your mindset has let you know this is where the kids need to be?

RYAN
There are stories of "aha!" moments, when the students see where their learning relates to and matters in the real world. There are also stories of seeing the academic growth of students.

I can think of one day where we were talking about the interdependence of our community and our lives. It just happens that it was raining, and the community we were exploring did not have a stormwater collection pond. We discovered that we could trace where the water was running all the way to the river. We could see where new construction was mitigating soil erosion into the stormwater system. We went all the way down to the river, where we could see the trash flowing from the culvert into the river. The students said, "We should probably pick some of that up so that it does not photodegrade into smaller chunks and fill up the fish tummies!" That was the moment that students knew that the trash they put in the playground would connect to a larger system.

The beauty is nature-based learning works with a wide variety of cognitive and academic abilities. I had a student working academically at a Grade 1 level in Grade 5, but through experience, he saw the connections.

GRAHAM
There are so many beautiful stories. I can tell you of the high achiever who leapt into a new stratosphere of understanding. Also about the kid who has not written one word in his schooling, and in Grade 4, just yesterday, he wrote an acrostic poem that he worked so hard on that it brought his mother to tears (and me!). It is purely because he sees his learning all around him. He is out there experiencing, which motivates him.

Questions we often get from parents are "Is this a program suitable for my child?," "Is it suitable for a child with learning disabilities?" and "Is it suitable for a student with an individual learning program?" What we see time and time again is that this type of program motivates, connects and engages kids. The curve of learning is just beautiful to watch!

How do you feel that the nature-based approach gives your curriculum more depth and meaning?

RYAN
I think the important thing is that because we don't teach in a classroom all the time, we have developed scaffolding that helps guide students. Often that is some form of thinking routine, organizer or sentence starter. We work to uncover the thinking that provides kids with a language and starting-off point. Through the journalling we have developed and used for years, we are able to support students to be successful with language. We have routines to guide questions with: warming up or getting started, digging deeper, and then showing connections and comparisons. Using these methods helps support students because it takes the pressure off them.

GRAHAM
Beyond the writing, as well, there are the mathematical concepts that you can actually see and feel. They have measuring tapes and are measuring actual rectangles and using formulas. They are racing against their peers, hooting and

hollering, running around looking for rectangles. When it is right there, you can see it. As a teacher, I can say, "Look closely at this again. Do you mean 52 centimetres or 52 elephants?" It is the immediate feedback, and then the application. We don't learn the math to just do it (because that learning is fairly shallow)—when you apply it, then it matters.

For example, we have a parent who will let us build a garden in her backyard for specific plants. We are going to research how plant placement affects growth. The row spacing, plant spacing—it all becomes data that the students will give to an actual homeowner, who will select an actual plan that will actually be built. It really matters! So when we are learning a concept like calculating rectangles, you put it into real life, and it sticks.

As a teacher, you really have to have the eyes to see it. There is a real connection with not only writing and mathematics but all curriculum areas. For example, when learning simple machines in science, all my students know how to adjust their derailleurs and brakes on their bicycles. Kids bring in their bikes and go for bike rides. I remember once, rolling down the road, a kid's chain fell off the bike, and I rode back and asked, "Hey, buddy, do you need help?" He said, "Oh, no. I just need a tool." He adjusted his L screw and off he went, and his chain did not fall off anymore, because he understands how this simple machine works to accomplish his goal. This is concept-based learning and real-world skills that are right there in the curriculum.

Also, the community involvement is amazing! One example is Todd Martin, who has been helping us with bike parts. Kids feel that support; they feel that interdependence. We are in a position where we can fix these bikes, and there are others who are in a position that they don't have a bike, so let's give them a bike. Giving someone a bike is one of the best feelings I know, and to have my class give bikes that they have fixed is pretty amazing!

You mentioned "thinking routines" that guide students outside. Are there resources (like books), or is this something you've both developed through time?

GRAHAM

I believe it is a little bit of both. There are a few books for that pedagogical framework but also a lot of games and activities. As we are working with the students, ideas and methodology develop. We tweak and build our own ways in the experience. You find what is working and how to adapt it.

It is really how you take it up and what you do with it. Both Ryan and I may take it up differently, because we are different teachers with different journeys. The beauty, I feel, with this program is that we are not just going on field trips, having an interpreter come do all this amazing stuff that we recognize is really special, but then just going back to our classroom. We build things progressively and take up a journey.

You both have a wealth of knowledge around nature-based learning. What advice or suggestions do you have for our readers?

RYAN

The other day I was talking to an educator who said, "I don't think I could teach that way, because I don't know anything about nature." My reply was that when I started, I did not know anything about nature either. I could teach you how to move through nature and soft skills about exploring your inner person. I did not know a lot about topics like birds. You learn alongside the kids and explore and discover together.

One suggestion to start is to build the expectations of how you behave outdoors and give them support to be successful. You can't just go outside one day with students. We build the expectations (through things like anchor charts) for how you behave and what it looks like and how they are taking up their learning. We spend a month where we work to build that trust and knowledge with the kids.

Teachers can start by taking little steps to get students outside. Going outside and observing and sketching nature.

Another simple start for educators is to watch nature documentaries about Canada. *The Wild Canadian Year* on CBC Gem is one example. They can be a wonderful way for teachers to start connecting kids to journalling routines and outdoor knowledge as they build appreciation for our

amazing natural world. That could be a jumping-off point.

An important suggestion is to get training. Both Graham and I had training and have built background knowledge for nature learning. Graham has an amazing background in interpretation that is a great asset to our program.

One suggested course is the Outdoor Council of Canada Field Leader Program (https://outdoorcouncil.ca/Leadership_Training). In my opinion, every teacher graduating from a preservice teacher training program should take this course. It even helps support teachers to run a better basic field trip (even to a museum, or a walk around the block). It is a two-day course. It helps you plan a participant-centred activity. Letting you learn what you need to be successful. It cuts down the risk but also increases the educational experience of the kids. Kids don't learn if they are suffering. If it is −15 and their hands are freezing, they will not want to write in a journal, but if they have warm hands, they will have a great time. It is making sure what you want to do is compatible with the venue and objective. It helps you make sure that the kids have a great time and want to do it again.

Connections *thanks Ryan and Graham for their time. For more information about the nature-based learning program, follow the Instagram account (@fsdnaturebasedlearning) or contact Ryan at lemphersr@fsd38.ab.ca.*

Recommended Resources

Ryan and Graham have been inspired by and have developed ideas from many resources. They recommend the following as starting spots for teachers.

Coyote's Guide to Connecting with Nature (2nd edition)
by Jon Young, Ellen Haas and Evan McGown, with a foreword by Richard Louv
Owlink, 2010

Five Minute Field Trips
by Gareth Thomson and Sue Arlidge
GEOEC, 2002
www.geoec.org/uploads/5/6/7/2/56722653/5min-fieldtrips.pdf

Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners
by Ron Ritchhart, Mark Church and Karin Morrison
Jossey-Bass, 2011

I Love My World: The Playful, Hands-On, Nature Connection Guidebook (2nd edition)
by Chris Holland
Wholeland, 2012

3 Act Math
https://whenmathhappens.com/3-act-math/

Visible Thinking
www.pz.harvard.edu/projects/visible-thinking/

Listening to the Stories of Nature: Liisha Hinder

Alison Katzko

Liisha Hinder is a Grade 2 teacher and a learning leader for outdoor learning and mindfulness initiatives at Chief Justice Milvain School, in Calgary. In her 13 years as an educator, she has taught Grades 1–6. She is also pursuing a master of education degree in Indigenous studies.

Connections talked with Liisha about the power of story and connecting kids to nature.

Share about where you teach and what grade. Have you always been an educator at that school and grade?

As an educator for the past 13 years, and someone who is journeying through my master's of education in Indigenous studies, I have witnessed the transformation that sacred and intentional time spent in nature has offered kids. Knowledge is power. Truth telling is powerful. As an educator, I am committed to disrupting the paradigm in which I was taught, by unearthing my biases and carving space for multiple perspectives to tell the whole story.

I have spent most of my career in the northeast of Calgary. I currently teach at Chief Justice Milvain as a Grade 2 teacher and an LL for outdoor learning and mindfulness initiatives. I have taught Grades 1–6, and I am extremely grateful for the many amazing educators I have worked with along the way who have guided and inspired me.

What are you passionate about in teaching?

I believe in the power of truth telling. I believe in the power and potential of children. Knowledge without action is a burden. I believe we can do better. I will do better. I bring a passion for connecting kids to nature to share in an outdoor experience which offers opportunities for wonderment and to learn from the subtle stories that nature shares with us. An invitation to pause, dwell, listen, connect. In order for us to adopt the teachings of nature, we need to learn the art of listening. I believe that both little and big humans can benefit from stepping into the world around them to receive the subtle yet powerful messages that nature offers. To heal, repair and grow. They are always there—if we are willing to listen.

Guided by the words of Richard Wagamese (2016) that live deep inside my soul, I am reminded that "nothing in the universe ever grew from the outside in."

I am also passionate about offering different knowledge systems to support learning. Willie Ermine (2007) sees this space as "ethical space"—the space where thinking happens cross-culturally. I believe that *education* should be seen as a verb—not a noun. Fluid, not fixed. How might we be open to listening to multiple perspectives and knowledge systems and make meaningful connections and understanding through dialogue and experience—this allows for student agency. Our understanding is fluid and ever changing, as we are constantly introduced to new knowledge and continue to grow through new experiences. Similarly, nothing in nature is fixed and rigid—why should we teach students to be anything less than

fluid and evolving? I heard something from an Indigenous perspective that truly resonated with me: the concept of water and concrete—water always wins. How might we move and learn with ease and openness rather than from a fixed space through one colonized perspective?

What are some lesson approaches or ways of teaching you feel are meaningful? Can you share a story about why you believe this?

I try to connect learning invitations in a holistic way through themes and metaphors, allowing students to continue the knowledge spiral and see that there is a through line and connection to everything in life. When we become disconnected, we lose our purpose and reason for being here. I read once that we often forget that we are nature. Nature is not something that is separate from us. So when we say we have lost connection to nature, we have really lost connection to ourselves. The more opportunities to make connections, the more students see their space and place in this world as important and valued. It's literally everything. I also believe in the power of creativity and strive to add play and art in all learning initiatives. Nature is the best way to access student creativity, and I often teach through the provocation of nature invitations.

I am inspired by the quote by Richard Wagamese: "All that we are is story. From the moment we are born to the time we continue on our spirit journey, we are involved in the creation of the story of our time here."

I Am Because We Are—our classroom provocation for the year. Building on one story at a time.

Teaching Grade 2, we began the year exploring the prairies with a mentor text—*The Keeper of Wild Words*, by Brooke Smith (2020). There was a quote in that book that said, "Wild words dance each day for us to learn and connect with." The "language of animacy," as Robin Kimmerer (2020) refers to it, is an important concept to centre. That plants are knowledge holders and teachers if we are willing to engage in the natural world and use our senses, including our hearts, to receive that knowledge. She talks about the reclaiming of this traditional knowledge and the importance of language to affirming kinship and connection to our nonhuman world.

I took this as an opportunity to personify our natural world—to give space for its voice and stories to be shared and heard. A simple switch from *it* to *who*. *Who* connects to the heart, and if a connection is made, a sense of care and responsibility naturally happens. *It* allows for exploitation. Our world needs more connection and less exploitation.

We looked at the aster and goldenrod. Advice from the aster: I am hope, I am love, I am wild, I am free. The goldenrod had a story: I am medicine, I am flexible, I am a pollinator. Kimmerer (2020) shares her story of the aster and goldenrod: "That September pairing of purple and gold is lived reciprocity; its wisdom is that the beauty of one is illuminated by the radiance of the other. . . . When I am in their presence, their beauty asks me for reciprocity, to be the complementary color, to make something beautiful in response."

We unpacked what that means together as a class. We learned that they are each beautiful on their own. *I am*. But together they shine and become more beautiful. *We are*. One student shared, "They are like best friends. I am beautiful. Skylar is beautiful, and together we are the most beautiful." That was a humbling moment to see the organic connection between them and the natural world. The aster and the goldenrod are still part of our daily conversations.

An Indigenous perspective once shared with me is that everything alive has a giveback. There is nothing that has life that keeps it for itself. That was a lived and realized moment for me.

How do you feel your curriculum has more depth and meaning through these approaches?

There is noticeably more depth and empathy being built within our learning community. When I take students into our natural world, be it through an invitation within the four walls of a classroom or outside, it is evident that my students are connecting to the world around them in organic and authentic ways. There is a visible relationship between them and the natural world. Learning alongside nature offers a dynamic, not linear,

completion of curriculum. Students are always in dialogue with nature—asking before they take gifts from nature, listening to their hearts for the answer and offering gratitude if it feels right. That's powerful. The dance of reciprocity and connection is all I could ask for—more important than any objective to "check off" in the program of studies.

I am always offering a different perspective when inviting students to connect with Mother Nature. It is so easy for us to complain about how cold it is, how wet it is, how not ideal it is to be outside. I would offer that all times are the right time. Instead of cold, how can we offer an invitation to build resilience? I think it is inaccurate to chase perfect weather to be outside, just like it is inaccurate to chase only happy moments. Each opportunity is a chance to learn something about ourselves—to grow through situations that we have been told are less than ideal. For me, all are just experiences, neither right nor wrong, good or bad. Modelling that for students allows *them* to explore and experience the world around them, and to make their own meaning and understanding.

We recently went outside to build tiny apartments for our Atlantic puffins (on a cold day, I might add), and one of my students shared, "We went to the nature store to get some things to furnish our apartment." Or another time, when we went outside to write (on the snow), "The wind blew my page open. I think Mother Nature wanted me to write more."

You often connect your students to Indigenous ways of knowing. What are some guiding considerations for educators interested in following this path?

As someone who is committed to decolonization through education, getting students outside and understanding the importance of listening is a first step in the right direction. Listen to the subtle teachings of nature—our more than human relations and stories of Indigenous peoples are all important considerations.

Nothing about us without us is also something I keep very close to me and remember that I am learning alongside students each day. I ask a lot of questions. I seek information. I am not the holder of all knowledge, these are not my stories, and I come to this with humility, and continually seek knowledge and truth through perspective. It is said that you have two ears and one mouth, so I aim to listen twice as much as I speak so that I may learn.

I believe that when educators are able to meet their own truths and acknowledge privilege, there is an opportunity to "re-story" their classroom to ensure that Indigenous knowledge systems are incorporated into the curriculum and learning. As Richard Wagamese (2019) offers, "We are all one energy, one soul, one song and one drum." Just as the asters and goldenrods attract more pollinators together than growing alone, how might we walk together to pollinate the truth? This may sound idealistic—but we have never lived in a decolonized world, but as a collective orientation, and with willingness to sit and hear all sides, perhaps we can leave room for *hope* to imagine the possibilities.

Where did you begin your journey?

I began with my own wonderments, my own connections to nature, my own story. I feel like I begin each new day, to be honest. A sunrise inspires me, the tree outside, watching the birds play. I recently

started to put "my story"—which is a collection of my connections that were sparked by wonderments and my wanting to pause, dwell, listen, connect—into a small book series for both kids and adults. I started my book series with this thought:

> There are subtle yet powerful messages held in nature, if we only
> p a u s e
>
> You see, we are not disconnected from our non-human world. Our connection is palpable. Vital.
>
> There are subtle, yet obvious messages offered from Mother Nature, if we only
> p a u s e d w e l l
>
> Now more than ever, our minds, bodies, hearts and spirits cry out for moments to just
> p a u s e d w e l l listen
>
> Guided by Mother Nature, nourish what we are craving. Intentional moments to pause dwell listen connect

There is always something that sparks *my* childlike curiosity. That, to me, is important—embrace your inner child. I recently listened to a York Region Nature Collaborative webinar—Land as Teacher, through an Anishinaabe perspective. I was left with these notions: learning with the land is a culturally relevant way of teaching to connect to Mother Earth—she should always come first. It is an absolute must before you go into a colonized way of learning that you have taken kids to the edge of the forest—let them know they are safe and that there is nothing to fear. Clear your mind and your space of all expectations and connect without an agenda or a checklist. It reaffirms my pause, dwell, listen and connect. Not only do little humans need it, we need it. That is a great place to start. Each day—new, something to be valued and never taken for granted. Mother Nature literally gives life—we need her. You will be surprised what magic reveals itself. If I may be so bold, *we* get in the way with our own agendas, our own "how should it be," everything through control. The organic connection and dance of reciprocity will organically happen if the invitation is offered. Our job is to offer the invitation and trust.

I ended my book series like this:

> As part of your self-care practice, you are invited to step outside to:
>
> p a u s e d w e l l l i s t e n c o n n e c t
>
> with who is in your community.
>
> You are invited to be guided by Mother Nature.
>
> She has been waiting for you.
>
> For all the little and big humans who crave a
>
> self-love practice within their day.
>
> You are worth it. You are enough.
>
> Everyday is a chance to add to your story.

If you were to go to the other save ide of the world to teach, what one resource, material or piece of equipment would you take with you and why?

My open heart and open mind. If the teacher is the student and the student is the teacher, we need an open heart and mind to learn from each other every day.

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Connections *thanks Liisha for taking the time to talk with us about her teaching approach.*

Connecting Students to the Natural World: Xena Biffert

Alison Katzko

For eight years, Xena Biffert taught at St Rita School in the Ranchlands community of Calgary. She started with kindergarten but also taught Grades 4–6. Teaching a range of elementary levels has provided her with a broad perspective on children's learning.

Xena is currently exploring her new role as a Calgary Catholic Schools science consultant. In this position, she works with teachers throughout her district. Of the many aspects of her role, her favourite is connecting with educators and working to "support teachers in whatever way they need." As well as the projects they approach together, she is enjoying the opportunity to support best practice and to encourage teachers to get outside with their students.

Xena is passionate about connecting students to the outside world. She noted, "I have always looked for opportunities to get students outside. As I began taking students outside more, I really needed to reconsider the way I planned. I started to do a lot of backward planning." Backward planning, Xena explained, "is when you take students outside and the curriculum emerges through exploration." She takes students outside to explore and then looks at the curriculum to ensure that she's met curricular outcomes. This approach "allows curriculum connection but also encourages students' focus and interest to lead the way." Teaching through an emergent curriculum is authentic and meaningful because it gives students control of their own learning: "There's more meaning and depth in the learning because it's their learning—it's truly theirs! Students are more interested in it."

Topics arise and are covered through mini-lessons along the way, ensuring that students learn what's necessary to cover the curriculum. Xena shared, "To be honest, there aren't a lot of things that don't come up organically. You just have to really know your curriculum and listen! It does take time to develop that knowledge, and I did not plan this way as a first-year teacher learning the curriculum."

She suggests that teachers "print out the curriculum and have it as a working document." She looks at the curriculum every night: "Even if you pick one focal subject, you don't have to look at every subject each night. I decide that tonight I will look at my science and

review what I talked about today. Tomorrow I will look at my math." Her reasoning for looking at the curriculum every night is twofold. First, if you look at it every night, you develop a familiarity with it. Second, you can see where you can connect things the next day and then make that connection spontaneously where the students' interests align. The goal is "to continue to treat it as a working document."

Xena recommends starting with an overarching plan for learning: "Our learning and questions would always circle back to a big question or guiding question for the year." Having a guiding question to direct a big idea has helped her formulate and follow her year plan. As she said, "This method of planning allowed me to work with an emergent curriculum in an intentional way." For example, a question she recently approached

was, "How are we all interconnected?" Another one was, "What is our story?"

At the beginning of the school year, Xena creates a mind map, using the big idea behind the guiding question. She connects the curriculum, aspects of the community and resources in this framework. Using this plan throughout the school year, she can assess outcomes with simple jot notes and a class list.

Another key aspect of Xena's teaching is getting students outside regularly. An important part of the process is making time to go outside and being consistent with it: "This way it does not become something extra. It becomes a part of what we do. This builds a culture with the students, administration and parents, which leads to more buy-in and support." Building this culture creates an opportunity to formulate and answer questions about what happens outdoors and how it connects to more things. The questions encourage teachers to consider, "How am I actually going to intentionally connect this?" Xena shared, "I start the year with general ideas of how outside learning connects to curriculum, but as the emergent learning arises and there is daily reflection on it, knowledge and understanding emerge. Through this intentional work and reflection, teachers will be well equipped to answer questions about student learning from parents and administration."

Reflection is a key element of students' learning experiences: "Just like reflecting on the curriculum each night for teachers (because that allows us to really know what we are doing), it is important for students to reflect on their observations. Teaching them to reflect is an important skill. We often don't get time to reflect in our fast-paced classrooms. Often, reflection is combined with assessment, rather than standing on its own and developing as an important skill." Xena suggested the following:

> An easy starting point for journalling would be "I see, I think, I wonder," because it is a thought process accessible to students in every grade. Journal entries also require you to teach your students to ask good questions and think critically about things. Students, in order to have success, need to be taught that being outside is going to require a slower pace, and we'll need to be quiet

and use all our senses. There are lots of different journal activities to help. You have to teach them how to be respectful of outside and that they will be doing intentional, purposeful work. We are going outside for a reason.

Xena shared an example from her classroom:

An example of approaching this work intentionally and responsibly was when CPAWS and Green Calgary came to our school to do a citizen science project with our students.

We had been going outside consistently, and it was part of our school culture. These groups took us birding. They brought binoculars, and we went on a walk to observe birds. Students documented what they saw through sketching. We took what we had seen outside and recorded our observations on eBird (https://ebird.org)—a citizen science program that collects data on birds.

Our students were actively supporting the larger community through a citizen science project, while also learning about birds (Animal Life Cycles in the Grade 3 science curriculum). We focused on bringing writing to life through the use of details (Grade 3 language arts curriculum).

During this experience, a coworker familiar with our project brought our class a surprise. "Look what I found!" she exclaimed as she presented us with an egg she had found the previous weekend. This led to a big project involving the scientific process of identification, which in this case was a particular bird egg. We performed different science experiments to determine if the egg contained a bird that was dead or alive. We combined language arts and science through detailed writing about the predator–prey relationship. We wrote a story about what might have happened to the egg for it to have been found where it was. We connected with experts (such as Chris Fisher) who study birds, which inspired conversations that encouraged more research. Through this process, we came to the conclusion we had a goose egg. We also did some art that was inspired by the species to which the egg belonged.

This whole inquiry stemmed from student background knowledge, inquiries from outside observations and people coming in to share. It really aligned with our big question, How are we all interconnected?

As a teacher, Xena journalled alongside her students. When she reflects on her journals, they bring back memories of her experiences with her students. Not surprisingly, the one thing she would take with her if she were to teach in a far-off, remote land would be her journal. She explained, "The problem with me is I like to have a specific type of journal with a certain type of paper. It would be challenging if I'd have to find that journal in a remote location. I would start journalling my experience from the minute that I thought of the idea of travelling, or even as soon as I left my house! I would journal throughout my journey so that I would have created a memory from start to finish. It would have words, images, photos, pamphlets—I don't know—anything that would bring a memory of that journey. It would eventually become a 'walk down memory lane' of my adventure."

In her new role, Xena looks forward to continuing to build the philosophy and culture of connecting students to the natural world, with the knowledge that through their experiences with her, they are learning that we are all interconnected. She believes that building empathy and understanding through this web of interconnections exemplifies students' roles in enhancing well-being across the board.

Connections *thanks Xena for her time and for sharing her experience and advice.*

Urban Farm School: Carmen Lamoureux

Alison Katzko

In this in-depth interview, Carmen Lamoureux talks about her path to sharing the values and importance of food security. Raised in the hinterland and prairie landscapes of Alberta, Carmen is keenly aware that our livelihood and our food supply are dependent upon our relationship with the land.

Carmen runs the Urban Farm School in Calgary.

It's a real pleasure to talk with you this morning, Carmen. I wanted to start off with getting a sense of what your organization offers and what are some goals you have in creating an Urban Farm School.

I realized quite some time ago that there are a lot of life skills that I was raised with that I took for granted. I discovered this as people came through our property, sharing how much they were searching for these skills.

It seemed so fundamentally important to me to take at least some small measure of responsibility for my own food supply. It was an epic success and birthed a lifelong passion for organic growing and the power of a connected community.

Our property is the Urban Farm Permaculture Project located in the southwest community of Palliser. As part of the permaculture tours, I wanted to show what sustainable and ecological landscape systems look and feel like. It was important to me that this property provides not only healthy sustenance and abundance for my family but also creates a sense of place. Step by step, I began evolving my mature urban landscape using permaculture design principles.

Through doing those tours, I became aware that people were hungry for the knowledge and skill set for building more security for themselves. I started very slowly to start sharing workshops around seed starting, tomato growing and soil health—foundational strategies. It really started to blossom, and Urban Farm School grew!

I reached out and started having guest instructors who taught other topics in their knowledge around areas that I was not all that familiar with (such as beekeeping and raising backyard chickens). It became this hub for people who wanted to create resiliency skills and food security.

I must admit that when I first started, I had the knowledge and skill set but was nervous about teaching. However, I really realized I needed to dive into this because of the importance of the knowledge. I started to do it, not in spite of the fact that I was afraid of it but because I'm afraid and knew it needed to be done. I turned 65 years old this year, and I feel more engaged with my life now than ever before. This is largely due to the fact that I get to connect with all these individuals that are future-forward thinkers. It is keeping me really inspired.

It has become a very satisfying life path. Our company is supporting people in their desires to gain those life skills, to have more food security and, in the process, learn how to respect their ecology and soil. This creates more community connections, as well.

I love that! You have such a positive enthusiasm about your process and experience with "future-forward thinkers." As we have so many different age groups who read our journal, but mostly teachers, can you share about who takes your workshops and what your workshops entail?

I love to teach teachers! As you know, school gardening, environmental awareness and schoolground naturalization projects are areas that teachers are interested in learning more about to bring back to their classrooms. I love to share about soil health. I

also answer questions like, What are permaculture design principles? Why is it important to take care of our pollinators?

We can help support teachers so they "get it" and have the knowledge to share with their students. Teachers know their students and their own curriculum. Teachers already have that trust with their students that allows them to meaningfully share and provide the knowledge, concepts and skills for their own school context or project. For me, that is a lot more powerful to teach the teachers than provide school programs. I think that the impact is stronger.

Urban Farm School currently has online courses, on demand (learn at your own pace), tours and outdoor events. The Urban Farm School's goal is to promote the practice of regenerative local food production and permaculture and help contribute to creating vibrant, resilient and connected communities.

You can be an amazing resource as teachers apply those skills in their own context. You are obviously very passionate about food security. Is there a story you can share about how that knowledge has made a difference?

The way I grew up was centred around food security, because we did not have a lot of resources. The resources we applied were my mother's ingenuity, creativity, stick-to-it-ness and her ability to build resilience with very little. She always was able to make things taste good! The relationships between food security and things tasting good were always there.

It was back in the day, when we did not eat prepared foods, because they did not exist. Grocery stores were just starting. (I do remember when I went to the grocery store for the first time and got Velveeta cheese. It was so strange!) Local food was what we had. I remember freezers full of foraged berries, venison, moose, duck and fish and a pantry overflowing with canned fruit, veggies, meats, pickles and jams. And, of course, my sweet French mother's lovely little winemaking crock that helped fruit peels and berries meet their ultimate destination!

It was always fun. I grew up with food, family and things tasting good all lumped together.

Food security definitely focused on leveraging our local food supply. How did moving around when you were younger impact that and your family's ability to connect with local food?

It was my mother's ability to source out food, be creative and get out to areas that were totally unfamiliar territory for her (places with different techniques, spices and belief systems around food). She shared a whole new paradigm around food.

Upon moving to North Africa at the age of 13, my relationship with food and food security was forever changed. My eyes were opened to new methods and belief systems around growing, distributing, preparing and consuming food, as well as how we as humans relate to food culturally, physically and spiritually. We ate what grew locally, seasonally, and what we had access to, aware that everything could change in an instant, depending upon which way the political or economic winds blew and, very importantly, according to the relationships we had built with the local vendors.

When I returned to Canada as an adult, I was so struck by our incredible natural abundance and also by what I saw as a growing personal disconnect with our food supply. As long as food is being sourced out internationally (food that we could grow locally), can we really say we have food security? We truly have the ability to grow everything we need right here.

The other important part of that is nutrient density. If I am growing my own food, it is the most nutrient-rich food that I can find. That has mostly to do with soil health and agricultural practices.

I think, therefore, the reason I am so passionate about this story is the importance of building a relationship with food. As long as we are accustomed to going to the local grocery store as our pantry, we forfeit that knowledge and security.

If I could build my own home, I would have a pantry as big as my own kitchen. I am connected with my food. I do a lot of canning, fermenting and dehydrating. It all gives me a hyperlocal relationship with my food.

We have lost our connection with our ecology, which produces our food. It is only through that loss that we think it is OK to

completely abdicate from the responsibility of our own food supply.

As many of us are removed from that process, can you share one way to start? As well as one course that you would recommend as a beginning course?

I truly believe that the most powerful action we can possibly take is to secure even a small measure of responsibility for ourselves, our local environment and our own food supply. You can start by asking yourself, Can I grow something of my own? If you can't grow your own food, you could join a community garden, or contribute to a neighbour and share produce and build community in the process.

You can also start to source your own food and shorten the food chain. Even if everyone can shorten the food supply chain by one link. Of course, the shortest one is from your backyard to your plate. However, I recognize that we can't be raising cattle in our backyard. So we will have to source some products elsewhere (such as going to the local farmers' markets).

Our courses focus on bringing learning opportunities to folks who want to gain some real, honest, practical knowledge and fundamental life-enhancing skills. There is a course called Food to Table. It is a beginning-to-end exploration of all the steps that a person can take to start growing their own food. Basically, how to start a vegetable garden, what to do, what not to do, how to prepare your soil. Everything I do is completely organic and respectful of the natural ecosystems.

There are also classes on seed-starting process. This includes how to start seeds indoors, as well as outdoors (directly in the garden). Participants get a schedule for our area here. Included there are all the steps to success in our local cold climate area.

It has been an inspiring discussion with you today! Is there anything you would like our readers to reflect on as a last thought?

I recognize that as human beings, we hunger for that feeling of abundance, security and being able to have access to healthy food for ourselves and our families. We want confidence that we can take care of some of our own needs and create stronger connections, not only with our own landscape and local ecology but also with our community.

A big part of this is building community. In every single community, there are people who garden. Find out who has local expertise, or who may need an extra basket of vegetables shared on their front porch. The supportive interconnectedness is what builds community. I know even in my own community, there are elderly people who would love it if someone helped build a garden in their yard and shared the produce. Sharing knowledge, resources and skills helps all of us build strong, vibrant and supportive community relationships and contributes to much greater levels of resiliency in times of need. That is what builds a community. There is nothing that brings a community together more than food.

There is so much possibility and promise if we can get people growing again.

Connections *thanks Carmen Lamoureux for taking the time to talk with us. For more information about Urban Farm School, go to www.urbanfarmschool.ca.*

Building Successful Outdoor Programs: Bill Bagshaw

Alison Katzko

Bill Bagshaw is a dedicated teacher from Michael Phair Junior High School, in Edmonton. He teaches Grades 7 and 8 environmental education and science and hopes to expand his outdoor program in Grades 7–9. He has over 20 years of experience building outdoor programs in several Edmonton schools, including Avalon Junior High School and Riverbend Junior High School.

When asked for his advice on starting an outdoor program, Bill said that teachers must capture students' enthusiasm. They must create a "long sales pitch where you are promoting it and how much fun it is." Talking about his own students, he said, "This current year, the students love to burn things! They love creating fires!" He also suggested doing field trips, if you are able to: "That really sells the program, and you can then work to build it up. Once that has been done, you can add some things, like research projects."

Bill has found that this process helps the program succeed, "such as at Avalon, where it was one of the top two options that kids were wanting." This allowed him to select students "who were keen and motivated."

He also shared that "administrators who have been supportive in allowing different projects and field trips make an important difference." Building students' enthusiasm—and, therefore the school community's enthusiasm—has allowed him to continue outdoor programs where they may have otherwise been questioned.

When asked to share an example of a project he was involved in developing, Bill talked about the Parks Project, in which students learned about the history of Canada's national parks:

> Part of the process is going and visiting Elk Island. They also consider where the next national park should be located. What was really interesting was that the next president for Parks Canada was from Edmonton. I just ended up e-mailing him and asking him if we could send him the students' final project. He said, 'No, I want to come and be a judge and meet the kids!' So the president of Parks Canada came and was a judge when the kids presented their parks. What was really neat was that groups of the students had selected a park that the president had just gone to visit as a potential national park.

Bill recommends the book *Quality Lesson Plans for Outdoor Education*, by Kevin Redmond, Andrew Foran and Sean Dwyer (2009). He has also been sharing resources and building a community for outdoor educators through a shared Google Drive. This folder contains collaborative resources and ideas developed by like-minded educators. If you are interested in joining this shared space, e-mail Bill at bill.bagshaw@epsb.ca.

Here are some outdoor activities that Bill developed. Photography is great for getting students involved in outdoor projects. The slide show that accompanies this project is available on the GEOEC website (www.geoec.org).

Outdoor Photo Scavenger Hunt

The purpose is to get you outside and connect with nature a bit. To get some of the photos, you may have to do some research to know the answers to some questions.

Activity 1

Get dressed to be outside, and take your cellphone with you, along with this sheet. Go around your area (maintaining proper physical distancing), and take pictures of as many items as you can. Just get outside for a bit.

- Take a picture of a birch tree.
- Take a picture of a spruce tree.
- Take a picture of a pine tree. (There is a difference between pine and spruce. Look it up to make sure you get it right.)
- Take a picture of a small bird's nest.
- Take a picture of an aspen tree.
- Take a picture of deer scat.
- Take a picture of a berry still on a tree.
- Take a picture of any kind of bird.
- Take a picture of an animal track.
- Take a picture of a rosehip.
- Take a picture of mouse or vole tracks in the snow.
- Take the best nature picture you can. (This can be anything—just make sure it's a really good picture of nature.)

Activity 2

Get dressed to be outside and take your cellphone with you, along with this sheet. Go around your area (maintaining proper physical distancing), and take pictures of as many items as you can. Some items require you to write down an answer, so bring a pencil.

You might not be able to do this one in one day. No rush!

- Take a picture of a pussy willow.
- Take a picture of an American robin (my favourite bird).
- Try to record the morning song of a robin.
- Take a picture of a male mallard duck.
- Take a picture of leaf buds from a poplar tree.
- Smell the leaf buds and describe the smell.
- Take a picture of a flowering plant emerging from the ground.
- Take a picture of the leaf buds from a lilac tree.
- Take a picture of a red-winged blackbird.
- Try to record a male red-winged blackbird singing.
- Take a picture of another migrating songbird of your choice.
- Take a picture of a ladybug. Write down how many spots it has and search if it is native to Alberta. (Chances are it isn't!)

Nature Project Photography

You must create a presentation that includes all the photography skills we learned in class. You must make a slide for each skill, attach the best photo you took on the school grounds and explain how your photo represents each skill.

Skills

- Details
- Frame horizontal
- Frame vertical
- Viewpoint—angles
- Rule of thirds
- Lighting
- Lines
- Colours

Reference

Redmond, K, A Foran and S Dwyer. 2009. *Quality Lesson Plans for Outdoor Education*. Champaign, Ill: Human Kinetics.

Connections *thanks Bill for talking with us about outdoor education and sharing the activities.*

Resources

Inside Education: Meaningful Outdoor Field Trips from Your Schoolyard

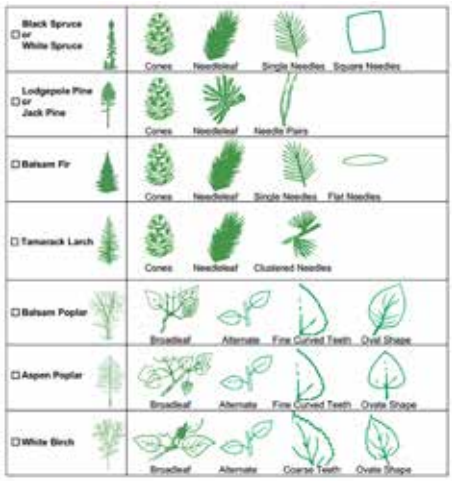
Kathryn Wagner

For over 35 years, Inside Education has been bringing environmental and natural resource education to schools across Alberta. We spend most of the year exploring the outdoors with students and teachers, and we believe that the best way to educate and to inspire environmental stewardship is to have students experience the natural world first-hand. Typically, in spring and fall, thousands of students visit one of our six demonstration forests to gain an understanding of these dynamic forest ecosystems or visit nearby wetlands to search for invertebrates.

Of course, the COVID-19 realities we all have been facing have meant that bus trips to the wilderness have not been possible. To keep with our mandate of supporting teachers and inspiring students—even when we cannot see you face to face—Inside Education transformed our field trips into teacher-led opportunities. Although we expect to be back up and running at these field sites soon, we thought we might share a sampling of the year-round activities teachers can lead on their own. Whether it's that little stand of trees beside the soccer field or a nearby natural area, there's sure to be opportunity for discovery right outside your school doors. So line up your students and go check it out!

Try these activities using simple materials:

- Find out if your tree is native to Alberta using a simplified identification key. Students can even use their observation skills to create their own keys.
- Hone students' math skills by calculating tree diameter using a piece of string. Wrap the string around the tree, record the length of the string, and use this formula: diameter = circumference/π.
- Sketch your schoolyard on a 10 × 10 grid paper. Colour the squares with human elements (picnic tables, playgrounds, paths). Then, add up the uncoloured squares to get the percentage of natural area.



Tree identification key

For more activities, check out the wide range of learning resources our educators have created to support and enhance outdoor lessons with Alberta-specific, curriculum-connected materials. Our website contains field trip teacher's guides, videos, activities, posters, games—you name it!

Throughout the 2020/21 school year, we distributed forest, energy and water tool kits stocked with equipment, activities and guided instructions to support teachers. We are working on a K–3 outdoor explorer kit in collaboration with GEOEC and hope to make more kits available soon. In the meantime, all the resources are available on our website, so you can create your own kit or use the activities from the teacher's guides.

As we all return to something closer to normal, remember that Inside Education also offers PD throughout the year to give you a first-hand opportunity to chat with experts, take part in tours and receive hands-on learning to enrich your lesson plans.

We at Inside Education think we all need a break from screen time this school year. We hope to help teachers feel confident enough to step outside their classrooms and have meaningful outdoor experiences with their students. If you're a veteran outdoor education teacher—and we know that many *Connections* readers are—here is a challenge: if you have a student teacher or a beginning teacher in your school, share the activities above or send them our way.

Discover Inside Education's full suite of learning resources, grants, youth summits and PD opportunities at www.insideeducation.ca.

We are here to support you every step of the way.

Kathryn Wagner is the program director at Inside Education.

GEOEC Sponsor Organizations

CPAWS
CANADIAN PARKS AND WILDERNESS SOCIETY
SOUTHERN ALBERTA CHAPTER

CPAWS Southern Alberta provides fun nature experiences to meet your teaching goals virtually, in the schoolyard or in a local park. Teachers across Alberta can access our cross curricular Bring Nature Home activities to enjoy in your classroom or book us for an interactive, virtual experience. In the Calgary region, we offer loanable education kits and safe, in-person programming such as snowshoeing in a local park. Recently, we also expanded our classroom and hiking programs to the Pincher Creek region. Get in touch with us today at education@cpaws.org!

CONTACT
JACLYN ANGOTTI (SHE/HER/HERS)
E: EDUCATION@CPAWS.ORG

Rocky Mountain Adventure Medicine Inc. is a leader in wilderness and remote emergency response skills training. We offer Wilderness First Aid courses that meet OH&S provincial guidelines as well as CSA standards. We also offer courses in Swift Water Rescue; Ice Safety; Survival; Animal Awareness. We work with educators, youth leaders, guides, SAR teams, and Provincial and National Parks staff and have presented national and internationally at SAR conferences.

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Beaverhill Bird Observatory

BirdSmart© engages and inspires students to learn more about birds, conservation and climate change. It focuses on how we can protect the natural world though interactive digital webinars or in-person presentations and features a live bird of prey. Presentations are available for all grade levels and tailored to match topics in the school curriculum. During these presentations, your students will learn from a qualified biologist about wildlife biology and how humans are affecting the planet and what students can do to help. This program is operated by the Beaverhill Bird Observatory, Canada's second oldest bird education and research station.

CONTACT
E: EDUCATION@BEAVERHILLBIRDS.COM
W: WWW.BEAVERHILLBIRDS.COM

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RavenRSM is Canada's leading provider of Rescue, Safety and Medical training. From technical rescue and workplace safety to remote medicine, RavenRSM's training and equipment enables Canadians to work and play in challenging environments across the country. Contact us at info@ravenrsm to learn how we can support your outdoor education program's wilderness first aid and swiftwater safety needs.

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Lesson Share

Make-a-Park

Gareth Thomson and Sue Arlidge

In this activity, students learn about different types of parks as they create a mini-park in a natural area. As they do so, they practise their descriptive skills and become more aware of the natural world.

Time required: One hour

Materials required: Three-metre lengths of ribbon (or string or rope) for each pair of students. You'll also need an area that has some natural diversity in it—the more natural, the better.

Instructions

Before this activity, ask students to define the word *park*. Ask them if they feel that they are in a park area. Ask them to tell you if this park area is more to protect plants and animals, or more to allow recreation and provide play areas for students.

Tell students that parks have been created for different reasons over time:

- Initially, parks were created to protect unique and special natural features (for example, Banff National Park was originally created to protect the hot springs found there).
- Next, parks were created to protect the natural heritage found within representative areas to remind us of what used to be here.
- The emphasis these days is to create parks that protect biodiversity, or the variety of plants and animals that still remain.

Of course, smaller municipal parks also exist, mainly for people to walk their dogs and breathe fresh air. Tell students that, in pairs, their job is to create a mini-park somewhere in the natural area. Each pair will receive a ribbon, which will represent the park boundary. Students can design their park for any one of the three reasons listed above. You may wish to model this for students: for example, a ribbon surrounding an interesting and unique stump is a good example of the first reason, while a ribbon surrounding an area crammed full of different plant species is an example of the third reason.

Tell students that once they have agreed on a park and had a close look at what it contains, they will write a short, descriptive paragraph about their park (perhaps in the style of a travel brochure, commenting on the wonders of nature contained in the park). Then students will leave their descriptions beside their park and travel to another park, reading the descriptions of their peers and trying to find the features that are referred to.

Discussion

Ask students why we should create parks. If their park were a real park, would there be a limit to how many visitors could go there before the park was damaged somehow? Were some of the parks better suited to recreation or protection? How would students feel if part of a nearby park area were to be developed for homes for humans?

Variations

- In lieu of writing, students can simply leave a "park interpreter" in charge of interpreting the park to visiting students.
- To assist this student, have the group insert toothpicks or other biodegradable objects into the soil—these will be "interpretive signs" that will prompt an explanation from the interpreter.
- Students may work in groups of four if your natural area is small.

Reprinted from Gareth Thomson and Sue Arlidge, Five Minute Field Trips: Teaching About Nature in Your Schoolyard *(GEOEC, 2002), 12, www.geoec.org/uploads/5/6/7/2/56722653/5min-fieldtrips.pdf. Minor changes have been made to fit ATA style.*

GEOEC Awards

Nominations for the 2021/22 GEOEC Awards opened in June 2021 and will close on **May 10, 2022**. Award recipients will be recognized at a GEOEC PD event next year.

For more information or to download the nomination form, go to www.geoec.org/awards.html.

Appreciation of Service Award

The Appreciation of Service Award is presented to member or nonmember individuals and organizations in acknowledgement of service contributing to the professional growth of GEOEC members. Contributors can include but are not limited to the following:

- Event hosts
- Providers of materials or resources
- Sponsors
- Affiliate organizations and departments that have been of significant benefit to GEOEC

Award of Merit

The Award of Merit is presented to member or nonmember individuals and organizations in recognition of exemplary teaching, leadership or service in the field of global, environmental and outdoor education. Considerations include the following:

- Teaching
- Leadership or service representing a significant commitment of effort and time
- Effective influence on the development of global, environmental and outdoor education in a region, province or nation
- Contribution to the awareness and understanding of an environmental ethic
- Extension of teaching practice, research, legislation or funding in global, environmental and outdoor education

Distinguished Fellow Award

The Distinguished Fellow Award is presented to a member or nonmember in acknowledgement of outstanding achievement and distinguished service in the field of global, environmental and outdoor education. Considerations include the following:

- Years of service
- Significance of achievements
- Effect of leadership
- Commitment to GEOEC's development and operation

GEOEC Executive Service Awards

GEOEC Executive Service Awards are awarded for two, five and ten years of service to the executive of GEOEC and to teacher professional development in Alberta.

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Maggie Shane, the ATA's privacy officer, is your resource for privacy compliance support.

780-447-9429 (direct)
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For more information on the ATA's privacy policy, visit **www.teachers.ab.ca**.

Global, Environmental & Outdoor Education Council

Mission Statement
To promote involvement in quality global, environmental and outdoor education

Objectives
- To provide a vehicle for Alberta teachers for professional development and communication in global, environmental and outdoor education
- To study and make professional recommendations about global, environmental and outdoor education issues
- To network with other provincial organizations that have similar concerns

Membership
- Regular member—Active and Associate members of the Alberta Teachers' Association, as specified in ATA bylaws, are entitled to full privileges of council membership including the rights to vote and to hold office.
- Student member—Student members of the ATA are entitled to all benefits and services of council membership except the right to hold office.
- GEOEC members may also choose to belong to the Canadian Network for Environmental Education and Communication (EECOM) for an additional fee.
- ATA members may sign up for a GEOEC membership through the ATA website as their choice of one free specialist council membership included in the ATA annual fee.
- ATA members and subscribers may also sign up for a GEOEC membership and pay a fee determined by the GEOEC executive. From time to time the executive may decrease the fee to provide incentives for membership recruitment.

Subscribers
- Persons who are not ATA members as specified by ATA bylaws receive all the benefits and services of council membership except the rights to vote and hold office. Subscribers do have the right to serve as community liaisons on the council executive.

Publications
- The GEOEC recognizes the wide range of interests among members and strives to foster the exchange of ideas and provide information and articles relating to the various components of the elementary and secondary curricula through the publication of *Connections*.
- The GEOEC maintains a website in order to publish timely information and provide access to like-minded organizations and individuals.

Annual Conference
- The annual conference features a blend of activities, indoors and outdoors, ranging from hands-on workshops to social gatherings. All grade levels are represented in sessions. The emphasis is on practical information and application. The annual general meeting of the GEOEC is held in conjunction with the conference.

Executive
- Members are elected to serve on the GEOEC executive.
- Contact the president or past president of the GEOEC through the ATA office if you are interested in seeking a position.
- Elections take place at the annual general meeting during the annual conference.

Workshops
- Various activities and workshops are organized by the GEOEC either as standalone events or in conjunction with other organizations.

Join now and become involved in the Global, Environmental & Outdoor Education Council

Name _____ Alberta Teaching Certificate No _____
Address _____ Postal Code _____
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