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 finish 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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What a rollercoaster ride this past year has been! It’s difficult to even find the words to describe the changes we have all collectively witnessed and experienced beginning in the fall of 2019 with the arrival of COVID-19. Despite the many resulting challenges and hardships, one thing has never failed to impress me during this time—the overwhelming commitment to, and support for, getting students and teachers out of doors. Purely in searching for some kind of silver lining, I can’t help but consider that perhaps we as a society needed the reminder to slow down and appreciate nature and family time. Let’s take a look at some of the many wonderful outdoor initiatives undertaken during this otherwise unsettling time.

The fall of 2019 started off with a fantastic PD event in Bow Valley at the Canadian Rockies Outdoor Learning Centre, where Jay Honeyman stole the show with his Bear Safety—Bear Cart, a wonderful teaching and learning tool that we have been fortunate enough to host at many GEOEC events over the years.

In November, Calgary was home to the Physical Education & Outdoor Education Professional Learning Event, which drew in over 200 participants. Adam Campbell launched the event with a powerful and moving keynote presentation. Then teachers went off to attend sessions focusing on over 25 different topics (including health, physical education, and environmental and outdoor education).

December saw the first major event in the Edmonton area in several years, with our Solstice Series at the beautiful Alfred E Savage Centre. The incredible lineup of presenters included representatives from Beaverhill Bird Observatory, Raven Rescue, WILDNorth, Edmonton River Valley Programs, Project WILD and keynote speakers Dale and Colleen Kiselyk from Nature Alive Adventures. After such an enjoyable success, we can’t wait to present live and in person up north again.

We welcomed the new year in January 2020 with a series of refreshing presentations at the Beginning Teachers’ Conference and Preservice Carousel. There is nothing better for seasoned educators than being surrounded by inspiring, energetic and motivated new educators, and it’s always a pleasure to outline and offer the many benefits of specialist councils and resources they can access.

That same month, we held our annual Winter Solstice Series in Calgary. Participants and guests were welcomed by over a dozen different vendors and service providers, all showcasing their visual displays and information. We extend our gratitude to each and every one of them for their ongoing support of teachers in our province. You’ll find more information on several of them throughout this journal. The stars of the evening were keynote speakers Dax Justin and Ricky Forbes, two very dynamic and passionate individuals who spoke of following one’s dreams, the pursuit of life’s deeper meanings and facing those tough challenges ahead.

Spring was to be a time of conferences and other large events, but of course the world had other plans. We are so grateful for all the amazing teachers who stepped up and demonstrated incredible leadership within their communities during such an intense time of need.

Fast forward to the fall of 2020. The new school year was certainly unlike anything we’ve seen before—back in person with many necessary restrictions in place to keep students and teachers safe. In spite of the uncertainty and challenges, I think we all agree that it was wonderful to be surrounded once again by the laughter and energy of kids in classrooms. We give much credit to the many amazing educators across the province who have been working so hard for their school communities in the midst of such turmoil.

Remarkably, even considering all of the challenges we have faced, this school year may just turn out to be one of our more successful starts. From September to December 2020, GEOEC has hosted and taken part in over a dozen different PD events, webinars, speaking events and online training workshops. Later in this journal, you will read about the incredible work the GEOEC executive members have been engaged in.
across the province. Just a sampling of these events includes our incredibly successful, new and improved Alberta Outdoor Playlist: Volumes 1 and 2, as well as a number of Around the Campfire networking and resource sharing evenings. Of course, we can’t forget the Bunnyhill Experience, which saw nearly 100 preservice and first-year teachers register. In the first three months of the school year alone, GEOEC saw an increase of over 60 new members!

I would like to take a moment to thank each and every council executive member for all of their effort, time and dedication in helping to inspire and support teachers across this province. We would be nowhere near our target today if it weren’t for this exceptional team.

And, of course, I’d like to give another big, well-deserved thank you to all teachers across the province for your dedicated and unwavering hard work. I wish you all the very best of luck in your adventures, and I hope to see you out on the trails again very soon!

Note: If any of our readers see a need for Global, Environmental & Outdoor Council sessions at conventions, conferences or PD events, be sure to contact us so that we can organize something in future.

Please keep up to date on the latest news and events by following us on Twitter, Facebook and Instagram. Do not hesitate to send us a note with any questions you may have.

Court Rustemeyer
Hello and welcome to the 2021 issue of Connections! This journal highlights the recognition of several outstanding Alberta educators (through interviews and award announcements) as well as practical resources to help us shape our priorities in 2021 and beyond.

In February 2020, I had the privilege to attend the Teachers Institute on Canadian Parliamentary Democracy. I spoke with many amazing Canadians, all of whom stressed the importance of engaging youth in real-world topics and issues to inspire them and show them that they can make a difference and be a meaningful part of the world they live in. Through the interviews in this journal, I was fortunate to engage in many inspiring conversations with outstanding educators doing exactly that in Alberta. One thing that stood out was just how much Alberta teachers and organizations strive to truly hear and inspire youth through their passion to be innovative, authentic and meaningful. Educators are turning to outdoor education to find curricular connections, mental health benefits and engagement for youth. They are discovering that when children and teens can apply what they learn in a classroom to real-world scenarios, they can better retain that information. There is so much outside the four walls that students need to explore and discover about the world around them.

I fully believe that outdoor experiences can be the catalyst for powerful and memorable learning. Having conversations with outstanding educators in Alberta, it became evident that outdoor learning is more than simply adventure sports. It can be found in a wide range of environments and situations that add meaning and depth to the curriculum. This issue of Connections aims to support and promote these areas through dialogue, research, thinking and practice from critical perspectives in the fields.

This issue has a lot of information to get you thinking. In the GEOEC Business and News section, you’ll read about some excellent workshops and programs GEOEC brought to educators in the fall of 2020, and we have plenty in the works, so remember to sign up and become a member so you don’t miss out! The Featured Articles section includes accounts of outstanding educators who are sure to inspire your next classroom quest to bring meaningful learning to your students. Educators share practical ideas and experiences of how they bring outdoor and environmental experiences to youth. You will find many curriculum connections and practical resources. You will discover innovative ways to engage students with time spent in natural environments. You will also find practical support through a list of organizations for teachers to connect with. GEOEC continues to connect with innovative organizations that work hard to bring global, environmental and outdoor education to youth.

These inspirational articles provide a sound rationale for why we do what we do. I believe you will find this issue insightful and inspirational, and I encourage you to share it with friends and colleagues.

Alison Katzko
Submissions Information

If you would like to share resources, topics and ideas in the next issue of *Connections*, please let me know. We would especially love to hear about lesson ideas and stories of your adventures with youth.

Being journal editor, I have often discovered that people are a little uncertain about presenting their experiences and ideas, and to that I’d like to say don’t worry. Most people are far better at writing than they give themselves credit for, and we can work together. I can help unpack your story in more detail by asking you questions. Please don’t let the worry of writing an article hold you back from sharing experiences or practices that will benefit us all.

Articles can be submitted year-round. When e-mailing submissions (including articles, artwork and photographs), please include a short biography and story. If submitting by mail, please remember to include your mailing address.

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 submissions to Attention: Journal Editor, Edgemont Elementary, 55 Edgevalley Circle NW, Calgary AB T3A 4X1; e-mail connections@geoec.org.
Autumn is typically a busy time of year for the GEOEC executive. We are actively planning professional development sessions, collaborating with different school boards about professional learning opportunities, and finalizing presenters and speakers for our annual Solstice Series events. Fall 2020 was no less hectic, but things certainly looked and felt very different. With the COVID-19 pandemic raging across the globe, protocols and restrictions were put in place that affected our daily lives. As educators, we were forced to alter the way we taught and interacted with students, which was challenging to say the least. Teachers were being asked to take their learning outdoors and were looking for unique, meaningful ways to make that happen. As a direct result of these new initiatives, we witnessed a major increase in interactions across our social media platforms as teachers were looking for ideas and resources to escape their traditional classrooms.

Helping teachers and providing resources to get their classes outside is what we do, but the pandemic modified the way we could offer professional development opportunities. As a council, we embraced the challenge and moved our sessions online. These virtual events commenced in early October with the Alberta Outdoor Playlist. The 48 participants in attendance were treated to presentations by Alberta Parks, Inside Education, Take Me Outside, Alberta Tomorrow, Parks Canada, CPAWS and Company of Adventurers.

The Bunnyhill Experience: A First-Year & Pre-Service Teacher Workshop took place in mid-November, and we welcomed 45 beginning teachers. Presenters at this event included Inside Education, the Canadian Wildlife Federation and the Earth Science Research Institute of Canada.

In early November 2020, GEOEC hosted a Project WILD Training and Certification Course that quickly sold out. We will continue to offer these courses as interest permits.

At the end of November, we reconvened Around the (virtual) Campfire for a networking session. The 30 folks in attendance listened attentively as their peers shared stories and ideas of what’s happening in classrooms across the province in the areas of environmental and outdoor education. There are some
pretty incredible initiatives happening right now, even in our modified educational settings.

Our 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 their certificates of achievement. These courses are offered at different times throughout the year as well.

Also, in early December, there was a divisional PD day in Fort McMurray. Court presented to a group of 25 educators and administrators about outdoor education and experiential learning.

In mid-December, just before the break, we had our final event of the fall: the Alberta Outdoor Playlist: Volume 2. This one built on the success of the first event but featured service providers from the northern portion of our province. Presentations were done by Alberta Bats and Nature Alive Adventures. At some point everything shifted again, and some of us were directed back to part-time or full-time virtual teaching. The irony of online outdoor education was not lost with any of us! We persevered and rolled into the winter break on fumes.

We welcomed 58 new GEOEC members and have added almost 200 new followers across our social channels. We are currently planning our next wave of online events, and we look forward to seeing you at one of the events!
During our Outdoor Playlist Volume 1 webinar, a group of passionate educators and enthusiasts converged online to hear from a range of organizations that support educators in Alberta. The new school year was under way and educators were finding their footing in the COVID world of teaching. The webinar was well attended as educators looked to connect. The organizations involved didn’t disappoint, sharing many ideas on how their programs could help encourage educators.

GEOEC treasurer Beth Townsend shared information about our partnership with Project WILD, a wildlife-focused program for K–12 educators and their students aiming to bring training and certification to members. Their interdisciplinary guide features 121 complete lesson plans about wildlife and the environment; each lesson can be adapted for any age, grade level or subject, and GEOEC provides members free training! If you are interested in attending a workshop, please see our website (www.geoec.org/) or send us an e-mail.

We also heard from Colin Harris, the founder and executive director of Take Me Outside. He launched the organization by running 7,600 kilometres across Canada over nine months, going into 80 schools across the country and engaging 20,000 students in conversations about their time spent in front of screens compared with their time spent outside, being active and connecting to nature. Colin shared how he continues to find ways of engaging Canadian students in exploring this country’s incredible backyard. He shared tidbits from his personal journey and reinforced the importance of unplugging and disconnecting more often. He also highlighted a new learning challenge that has been proposed to all Canadian teachers, inviting them to get their students outside once a week for the entire year.

Kathryn Wagner, from Inside Education, presented some of the programs and resources provided to educators in Alberta. An organization offering unique programs that immerse learners into the big picture, giving them a balanced look at key issues, Inside Education challenges each of us to become responsible citizens by understanding the science, technology and issues that affect our world. They provide outstanding professional development and youth programs.

Jaclyn Angotti, from the Canadian Parks and Wilderness Society (CPAWS), shared how they provide hands-on classroom exercises and encourage students to spend time outdoors. Their focus in education programs is to empower youth to understand their true connection to nature. As Jaclyn stated, “CPAWS has played a lead role in protecting over half a million square kilometres—an area bigger than the entire Yukon Territory—for the benefit of both wildlife and humans.”

Vicki Perkins and Catherine Medynski, from Alberta Environment and Parks, spoke about the Environmental Student Action Challenge. The challenge (completed in November 2020) invited Alberta students to develop a school-based initiative or project that addressed minimizing negative human impacts on the environment. The challenge gave students hands-on experience in tackling an environmental issue that directly affects them, their school or their community. The two speakers also shared their compelling passion for getting kids outside and learning about the natural world, highlighted the different programs offered through Alberta Parks and spoke of building capability in teachers so they can eventually lead their own enviro-based trips.

Paul Langevin, from Parks Canada—Palisades Education Centre, discussed the centre’s work in developing a way for students to engage in the outdoors while dealing with COVID restrictions. The centre is located in Jasper National Park, where youth groups attend multiday, nature-immersion programs with education teams. They provide all necessary gear (canoes, kayaks, mountain bikes, snowshoes, skis and more) as well as the training and experience to keep youth safely engaged in their quality programs.

Brett Kolasa and Bryce Willigar, of Company of Adventurers, explained how their organization
continues to support adventure in Alberta. Company of Adventurers provides instruction in many outdoor wilderness activities, with a strong focus on environmental education and stewardship.

Jennifer Janzen discussed and displayed the interactive and engaging maps, videos and resources from Alberta Tomorrow. Jennifer demonstrated how to use the organization’s fascinating interactive program and showed us how students could make use of their site and lesson plans. Of particular note was the online mapping of Alberta, where students can see how the landscape of Alberta has changed over time. The mapping program also allows users to change key factors to see how land choices change land use over time.

In a relatively brief evening webinar, a wealth of useful and engaging presentations allowed participants to come away with an abundance of resources and connections. If you would like to be involved in future webinars and workshops, please visit our website at www.geoec.org and remember to become a GEOEC member!
Project WILD Training

Project WILD is a wildlife-focused program for K–12 educators and their students. Throughout the year, GEOEC provides educator certification training (free to members). Based on educational standards, developed by scientists, and reviewed and field tested by educators, Project WILD is always a hit with educators looking for useful resources and ideas.

What It’s All About

Through the training, course participants learn how to navigate the interdisciplinary guide, which features 121 complete lesson plans about wildlife and the environment, each of which can be adapted for any age, grade level or subject. The active lessons cover the following topics and concepts:

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

Why You’ll Love It

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

Activities are designed to be infused into such mandated curriculum subjects as art, health, language arts, math, music, physical education, science and social studies.

The guide can be used by both classroom teachers and nonformal educators, including resource specialists, conservation officers, camp counsellors and Scout and Guide leaders.

The guide contains all the information needed to successfully plan and run each activity with students (objectives, method, background, list of materials, procedures, evaluation suggestions, activity extensions, key vocabulary and so on).

Ready to go WILD? Project WILD activity guides can be obtained by participating in an introductory workshop, where you will become a certified WILD educator.

GEOEC provides our members free training! If you are interested in attending a workshop, please see our website for upcoming dates (www.geoec.org/).

Since 1984, Project WILD has been a model for WILD education programs in Canada. The 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 US.
Back in March 2020, when it was announced that online and distance learning would begin, Adam Robb knew that above all else, connection would play an essential role in maintaining mental and emotional health for teachers. He began setting up informal online meeting times for interested educators.

Eight months later on November 30, GEOEC hosted a session in which educators could network and share stories. Educators from across Alberta who attended this opportunity were excited to connect and discuss new ideas and possibilities. These dedicated individuals were looking for ways to better themselves and their students in the name of outdoor education. The promise of networking and new ideas was too good to pass up!

Our elected president, Court Rustemeyer, warmly greeted everyone and thanked them for coming.

Adam Robb, the coordinator for the event, jumped right in, greeting educators and asking about their current projects and experiences. In this informative chat session, educators were made to feel inspired, connected and supported. It was exciting to hear of the incredible experiences students were engaged in.

It is interesting to think that, prior to distance and online learning, technology in the classroom was largely viewed as a significant source of distraction. It is ridiculously easy to pull out your phone in the middle of a conversation or to mindlessly scroll through social media for hours on end. However, since distance and online learning began, technology has become a key factor in keeping everyone connected. The new reality shows us just how important technology can be to enable us, as educators, to come together. Having a sense of community and knowing you have a group of people who will support you can make a big difference to the work you do.

At that first November session, the group discussed such topics as lesson delivery, engaging students with games, success stories and online resources. Participants were establishing and maintaining connection through communities of practice.

As the session ended and we said our goodbyes, it wasn’t with sadness or grief, but with anticipation and excitement for things to come. For those who attended, we thank you for your dedication and passion—your
I am very thankful to have had the opportunity for collaboration and conversation when the reality of teaching felt overwhelming. This group really inspired me to be a better teacher and outdoor learning advocate.

—Session attendee

students are lucky to have you. We hope to see you again soon at one of our many future events, and we hope you found the shared stories and resource ideas from the chats helpful!

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

Stay tuned for announcements about upcoming professional development opportunities from GEOEC.

Just a reminder that if you have not yet become 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. All active ATA members are entitled to join one specialist council of their choice each year at no cost! Free! Councils like GEOEC need members like you to enable them to continue offering PD events in the future.

ATA specialist council sign-up info is found on our website at www.geoec.org/membership.html.
With restrictions still in place for meetings, GEOEC executive members did not let that stop them from organizing an impressive evening of professional learning and networking for the Outdoor Playlist Volume 2, where participants were joined by several service providers from various areas of outdoor education.

Not only were we able to connect educators from across Alberta with an opportunity to network and share projects in the works, we also had speakers representing some amazing organizations share how they connect and support educators.

Susan Holroyd is the Calgary regional coordinator for the Alberta Community Bat Program, a nonprofit organization with the goal of increasing bat conservation efforts in the province. She spoke about the program, the resources currently available to teachers and future materials that will be available in the near future, including a batpack (more info on our website).

The organization works with homeowners and communities to solve challenges of bats in buildings, and to promote knowledge and understanding of bats. They also coordinate a citizen science project that encourages people to count bats at roost sites and report both numbers and roost information as part of an ongoing monitoring program. Susan’s enthusiasm and excitement were contagious as she answered questions from educators about the bat program, and about bats in Alberta. She ended her talk with a request for input and feedback from attendees about the types of resources and materials educators are looking for with regards to bats.

Next, we had Dale and Colleen Kiselyk from Nature Alive Adventures join us. This dynamic husband-and-wife duo shared information on their programs and experiential learning activities in the arts of bushcraft and survival skills. Nature Alive Adventures is a multifaceted family-run business offering numerous levels of survival and bushcraft courses, and outdoor education workshops as well as guided canoe trips, guided winter camping trips, national and provincial canoe certifications, and recreational drum circle facilitation and djembe instruction, all managed by their certified and experienced staff and partners. Dale and Colleen’s passion is to offer youth a way to immerse themselves into exuberant whole living through exciting and invigorating courses, workshops and community events. Their session was the perfect way to inspire all attendees to get their students engaged in outdoor learning.

Information about Spirit North was shared, and we are looking forward to hearing more about their work in coming webinars. Spirit North empowers Indigenous youth to be unstoppable in sport, school and life. Through the transformative power of sport and play, they help youth find the courage to take on any challenge, develop leadership skills, improve their health and wellness, discover new talents and unlock limitless potential.

With the connections made and the momentum being built, we are excited to continue to offer similar webinars in the future. Ideas and possibilities are already being discussed to make our next offering even more impressive. We’ll be seeing you all again very soon!

Thank you to all attendees for joining the webinar. Remember to get outside, and please do not hesitate to contact us for additional guidance or support.
Feature

Abraham Lake—Ice Bubbles and More

Abraham Lake is beautiful year-round, but the ice bubbles have really made it a popular winter attraction.

Abraham Lake is a reservoir that was made with the completion of the Bighorn Dam in 1972. The lake is about 33 kilometres long and is well known for its bright glacial blue colours in the summer. Through a contest held by the Alberta government, it was named after Silas Abraham, a guide from the Stoney Nakoda First Nation during the late 1800s and early 1900s. Mount Abraham that overlooks the lake was also named after Silas Abraham.
The water levels fluctuate dramatically from season to season. More water leaves the reservoir than comes in from about November to June, resulting in very low water levels in late spring and early summer. In July, the lake starts to fill up again and usually reaches its peak in mid-October. In the summer, a good rain in the mountains can raise the water level several inches overnight. In the winter, the dropping water levels can create large gaps between the water’s surface and the ice that can be several feet higher. You will even see thick slabs of ice sitting on the rocky beaches as the water pulls back from the edges of the lake.

The ice bubbles are created when methane gas is captured by the freezing surface. As the ice freezes more deeply, stacks or layers of bubbles can form. The methane is released by the decay of trees and grass covered by the water when the dam was created.

Many lakes have ice bubbles, but the ice bubbles on Abraham Lake are visible because of the tremendous winds that clear the ice. Numerous photographers have had to chase their tripod that the chilly winds have carried away. In the spring and summer these winds can create three-foot-high swells and may blow a canoe or kayak across the lake quite quickly.
The lake’s ice coverage varies throughout the winter. Abraham Lake is usually frozen over by the end of December, but in early 2020 it did not freeze until we had a week of −30 Celsius in mid-January. We recommend using the help of a tour guide who knows the lake well and can provide you with proper gear for exploring Abraham Lake and the nearby trails and waterfalls.

For those looking for services in the winter, Nordegg has two gas stations, restaurants, a hotel and many cabins to rent. Rocky Mountain House, about 50 minutes from Nordegg, has all available services.

Nordegg in Clearwater County, a truly magnificent part of the David Thompson Country Tourism Region. #DTCountry

Here are some of our favourite pictures of Abraham Lake in the winter.
A sunrise tour on Abraham Lake with Pursuit Adventures.

Flying over Abraham Lake with Rockies Heli Canada.

Classic ice bubbles shot with Mount Michener in the background.
The David Thompson Highway driving east by Abraham Lake toward Nordegg.

Seeing the bighorn sheep on the David Thompson Highway while going to Abraham Lake.

Abraham Lake has more to look at than bubbles.

Reprinted with permission from David Thomson Country. Minor changes have been made to conform to ATA style. David Thomson Country is the tourism brand for Caroline, Rocky Mountain House and Clearwater County. Highlights include Nordegg, Abraham Lake, the Kootenay Plains Ecological Reserve, Siffleur Falls, Ram Falls, Crescent Falls, Burnstick Lake, Cow Lake, Crimson Lake, Peppers Lake and the Ya Ha Tinda.
As the engines powerfully propelled us through the water, I sat and watched my students sitting on the back deck of the boat, smiling and laughing as they were splashed with water, feeling the boat rise and fall with the waves. In that moment, students were gaining an understanding of waves—what they are and how they feel—that they could not get inside a four-wall classroom. For me, it was a perfect example of my students not only learning about, but learning from the natural world.

This is just one of the many experiences I have had at the Bamfield Marine Sciences Center (BMSC) on Vancouver Island. BMSC is a working marine research station where students have access to university-level labs and equipment, as well as field experiences which immerse them in scientific and interdisciplinary studies around ideas such as biodiversity, reproductive strategies, adaptations, citizenship, Indigenous rights, culture and history. Students are immersed in the marine environment and see and discuss the impact of political and economic decisions on the environment. Over the last five years, I have been fortunate to lead hundreds of Grade 9 students on this incredible opportunity.

My experiences at BMSC have influenced me in my short teaching career. As I have reflected on these incredible experiences at BMSC, I kept coming back to the same questions. First, how do I shift my day-to-day teaching so that my students can have the same types of experience and engagement as they do out in Bamfield? Second, I am continually struck by the connection to a marine environment that students
create while at BMSC, which has led me to the simple question, How can I help students connect with their local environment and, ultimately, better understand the reciprocal relationship we all have with the natural world?

This reflection has become more important to me as we, as a society, continue to push up against the bounds of our ecological limits through actions leading to such things as habitat loss, species loss and climate change, which are all ultimately the “consequences of a particular worldview” (Davis 2009, 217). Seeing the impact humans are having on the natural world, as a teacher and a lover of the outdoors, I feel a growing responsibility to do something about this. However, in order to bring about positive change for wildlife and wild spaces, it is clear that “we cannot continue to do the same things that we’ve been doing; we cannot continue to be the same people; and we cannot continue to be the same teachers” (Jickling and Blenkinsop 2020, 122).

The Alberta Council for Environmental Education (ACEE) recently released the results of a survey they commissioned, which gathered information about students’ and teachers’ views in relation to climate, energy and environmental education in Alberta. As outlined in the report, Youth Narrative and Voice: Principles for Effective Climate, Energy and Environmental Education in Alberta, one of the findings was that students who participated in the survey “expressed a wish to know more about the connection between energy, climate and carbon cycles—but in an applied way that could give them the knowledge needed to take meaningful action on climate change and prepare them for the jobs of the future. They want to hear about the problems AND what they can do to make a difference” (Shaw, Bennett and Wang 2020, 8). Furthermore, students felt that “the local natural environment is an important opportunity to engage students with climate and energy curricula. They reiterated the issues of pollution and climate change to what was happening in their towns and cities. Equally, focusing on local solutions can help students understand relevant and possible solutions, as well as opportunities for study and future employment” (p 8). This shows that students want to not only learn about the natural world but also be involved and make a difference. Students want to learn about their local environment and the broad natural world, as well as ways they can positively impact the natural world. As such, the issue then becomes one of finding ways to overcome the barriers and tensions felt by teachers as curriculum designers and implementers when it comes to implementing a curriculum and a personal teaching pedagogy that works to connect students to the natural world. As individual teachers, we may not have the power to set government policy or curricular outcomes, but we do have the ability to shift our individual pedagogy and ultimately the way in which we do education with our students.

A key goal I have been working toward has been shifting my pedagogy to one that is more interdisciplinary, experiential and place-based pedagogy that seeks to facilitate “meaningful relationships to place. Indeed, because of human-caused carbon emissions and other dangers to climate and planetary stability, this work is necessary in part to cultivate the humility needed to ensure the future of places” (Tuck, McKenzie and McCoy 2014, 14). In short, by shifting my pedagogy, I seek to build an understanding in my students that they are connected to the natural world, and through that connection, empower them to make positive change for wildlife and wild spaces. Additionally, I want to use this interdisciplinary, experiential, place-based learning as a means to better engage my students in the curricular content, leading to students seeing the curriculum as relevant to their lives rather than distant, abstract and generalized.

Taking inspiration from my BMSC experiences, I applied for my students to attend the Campus Calgary/Open Minds (CC/OM) Zoo School program run in conjunction with the Calgary Zoo. My classes were chosen to take part in this CC/OM experience and planning started at the end of the last school year with the guiding question for the experience being, “What is our relationship to the natural world?” Due to COVID restrictions, the initial plan for the Zoo School experience, which involved a week on-site at the Calgary Zoo, had to be changed. Working with
organizers from CC/OM and the Calgary Zoo, a revamped experience was planned that involved virtual experiences and meetings with Calgary Zoo staff and conservation experts, as well as outdoor experiences in the community and a nearby natural park.

This was actually my second zoo school experience. My first zoo school experience took place when I was in Grade 4, and now, this second time in Grade 9. In my first experience with Zoo School, we actually got to go to the zoo and do hands-on activities there, including things like dissecting an owl pellet. When I found out we would be doing Zoo School again this year, I was wondering if it would be the same experience and the same activities, or if it would be a totally different experience.

In class, students were able to do hands-on examinations of different replica animal skulls and make inferences about the type of animal the skull represented, as well as different adaptations that the animal might have. Students also took part in live and recorded animal observations where they observed things such as animal behaviour and habitat. Through conversations with experts, students also gained a deeper understanding of how we rely on the natural world for such raw materials as food and fresh water and medicinal resources as well as such eco-services as air quality regulation, moderation of extreme weather events, soil formation and nutrient cycling to name just a few. Students also saw how the natural world affects our quality of life through impacts on our mental and physical health, recreation and other cultural benefits such as aesthetic values as well as religious and spiritual values. Through learning about things like the production of clothing and fast fashion trends, students saw how our political and economic decisions affect the natural environment and ultimately our quality of life. Through these experiences, virtual and outdoors, I hoped that students would not only deepen their knowledge and understanding of the natural world and their role within it but also deepen their connection to the natural world.

During our online Zoo School experience, we got to pick up, move around and sketch replica skulls of animals. Mine was a wolf. When I was observing the wolf skull I noticed that the eyes were more on the front of its face than the side which helped me know that it was a predator. I also learned while observing the skull that the bone underneath of their eye socket is where the muscle for their jaw is connected, so the bigger the bone the stronger the jaw. I live near the school, so I also love that I got to explore my own neighbourhood and other areas surrounding the school. On one of the walks we went on, we saw a coyote. We then talked about how the coyote could be one of the only things in the South Glenmore Park keeping the squirrel population in check from becoming overpopulated, but also how, with South Glenmore Park being so close to Oakridge, they could also be a threat to people’s pets. This helped me see that the nature world is not just in the mountains it is here and it is a part of our community. Even though it was partially online, it was still an awesome experience.
Using the Zoo School experience as a launching point, students began working on what I called their conservation action project. Students chose an endangered animal or an environmental issue of interest to them and started gathering information about their chosen topic. That research is then informing the conservation action they are taking. Through Zoo School and this project, I wanted students to understand that they have a role to play in maintaining the environment and that, even as Grade 9 students, they can work to become allies of the natural world and make a positive impact on wildlife and wild spaces. I wanted students to see that they are capable of taking action on their own and empower them to do that. Author and professor Robin Wall Kimmerer (2013) speaks about our relationship with the natural world in her book *Braiding Sweetgrass*, and calls us back to a relationship of reciprocity with the natural world. In her book, she writes:

A lot of the time you hear people say that the best thing people can do for nature is to stay away from it and let it be. There are places where that’s absolutely true and our people respected that. But we were also given the responsibility to care for land. What people forget is that means participating—that the natural world relies on us to do good things. You don’t show your love and care by putting what you love behind a fence. You have to be involved.

You have to contribute to the well-being of the world. (p 189)

Taking inspiration from Kimmerer, I hoped to move my students toward understanding that their individual, as well as our societal, relationship with the natural world is reciprocal in that the way we rely on the natural world and as such, we need to maintain and sustain it, so that it can continue to sustain us. Through the Zoo School experience and the work so far on their conservation action projects, students’ understanding of their role as citizens within the natural world has increased as well as their empathy toward wildlife and wild spaces. This is clearly seen through their work during Zoo School, but also through the work they have done so far on their conservation action projects.

My thinking about the natural world has changed in the sense that I now see that we are more connected to the natural world than I ever thought. Yes, we are becoming less and less connected because we have built barriers such as roads, and light and noise that separate us and the natural world. But even with those barriers, we are still connected to it and we can never disconnect from the natural world. You cannot fully disconnect from the natural world because we will always need its resources like cotton from cotton plants or oxygen from all of the plants and algae in the world. And because we need those resources from the natural world we need to make sure that it does not fall apart. We need to make sure we do things like plant trees and work to reduce air and water pollution. For example, we can choose to purchase products from companies that help the environment, such as Tentree, which plants trees every time you buy a product from them.

The types of projects my students are working on are varied highlighting their unique interests. For example, one group of students were initially struck by an article about wolves in Banff National Park, which led them to information about wolves in Alberta and how they are hunted and culled in an effort to reduce their predation on caribou herds. The students made the connection that in order to protect wolves, they actually need to protect caribou. They are working to take action to protect caribou, and by extension wolves.

A second group is looking at the endangered Athabasca rainbow trout in Alberta. Their action project centres on educating others about this fish species and the threats it is facing. Through the FinS Program and the Bow Habitat Station in Calgary, the students will be receiving fertilized rainbow trout eggs which they will raise at the school before releasing them in the spring. They will also use these eggs and juvenile fish as a way to create empathy in younger students at the school and teach them about Athabasca rainbow trout and the threats they are facing.
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One of the big takeaways from this experience for me is that we are more connected to the natural world than I ever thought.

Other projects include a documentary on the Bow River watershed, art projects that draw people’s attention to issues of trash and plastic pollution, as well as projects focused on tree planting, biophilic design, habitat fragmentation and more.

Me and my friends are working on our own action to help the natural world. For our conservation action project, we are going to make an outdoor classroom for the whole school to use. We will include native trees, bushes and other plants. Some of the trees we hope to use are limber pine, white birch, and trembling aspen. Even though it won’t be a huge area, these native trees and bushes will provide habitat for animals like birds and squirrels. We will have rocks and places for students to sit on and sketch their surroundings, and we hope that it helps other students connect with the natural world, and protect it so that it doesn’t fall apart.

By shifting that pedagogical approach to one which emphasizes place-based, interdisciplinary and experiential learning, my students have begun to develop stronger ties to their community, and have created a deeper connection to and appreciation of the more-than-human world. At the same time they have expanded their understanding of citizenship beyond simplified notions to the complex and multiple value systems, including ecological understandings and Indigenous knowledge and ways of being.

References


GEOEC would like to congratulate Court Rustemeyer for receiving the prestigious 2020 EECOM Awards of Excellence in Environmental Education and Communication, and Outstanding Educator.

The Canadian Network for Environmental Education and Communication (EECOM) works strategically and collaboratively to advance environmental learning to ensure Canadians are environmentally literate, engaging in environmental stewardship, and contributing to a healthy and sustainable future.

EECOM’s Awards of Excellence in Environmental Education and Communication recognizes contributions of outstanding individuals and organizations engaged in environmental learning across Canada. They recognize individuals and organizations that have collectively influenced hundreds of thousands of Canadian citizens and helped implement one of EECOM’s key goals—to advance environmental learning, ensuring Canadians are environmentally literate, engaging in environmental stewardship, and contributing to a healthy and sustainable future.

EECOM welcomes nominees working in a wide range of fields, including those that support Indigenous Peoples, histories and cultures in their approach to environmental education and communication (for example, honouring the spirit of learning, a sense of place, relational understanding, reciprocity, collaboration and language).
A Conversation with Court Rustemeyer

We had a chance to talk with Court Rustemeyer about his experience as an educator. The following is a summary of our discussion. It is evident that Court is passionate about making a difference for youth and is well deserving of this recognition as an outstanding educator by EECOM. Court is a full-time teacher at Vincent Massey Junior High School, in Calgary, Alberta. He teaches Grades 7 to 9 outdoor education and PE.

What Court Is Passionate About as a Teacher

I am a passionate person in general. When it comes to my life in teaching, I love the outdoors and having the ability to show students and teachers how powerful nature can be once we open our eyes to it. I really enjoy experiential learning, being out in the environment with students in an outdoor classroom every day. All these hands-on experiences and inquiry-based learning not only allow me to instill and show a greater understanding of Indigenous and land-based knowledge but also gives me the ability to show kids how to be outside for life. I get excited when I get the chance to share with students one of these experiences for the very first time. That becomes a guiding step in their lives and in their own future.

Finding Curriculum Within Experiences Outdoors

Nothing can replace the hands-on experience of experiential learning that requires students to apply not only what they have learned but also all of their energy into growing as young adults. What you start seeing is a true understanding of curriculum, because students are taught in a way that shows them a way of relevancy, hard work and dedication. When kids head outside, with hands-on experience they truly get to absorb that knowledge for the first time. It gives relevancy to what they have been taught in a classroom. It’s almost like watering a tree—I see growth in their lives as they make the curriculum relevant in their own lives. I think it’s true for students (and I think also for adults) that when they see true reward, we educators can see how curriculum becomes something that matters in outdoor education. The relevance of the problem solving, literature, hard work, dedication and all the other planning skills becomes relevant and meaningful in the tasks students take up.

Court’s Approach to Education

I try to see their experience and think, What can I improve on? How can I make the next group’s year even better? What areas can I show growth in as a leader and educator?

I’ve been fortunate enough to be part of countless adventures, experiences and trips with students. Each one of these experiences allows these kids to grow exponentially stronger, more confident and wiser overall in so many categories. I know this works and I believe it, because I have students who come back many years after graduating or leaving school, and they speak of their passion for the outdoors. They share a desire not only to continue their adventures, but also to become advocates for what they believe in. It’s a true goal of educators to see that lifelong learning instilled in youth and students when they come back and share about how they’ve gone out into their own journeys.

One thing I’m particularly proud of is when kids come back and share. For example, I just had a few students who came back to tell a story about going out to the coast on their own. It was neat to have them come back and want to borrow gear so they could do the exact same trip on their own that we had done together many years earlier. That warmed my heart and made me feel that the kids had found confidence and have that desire to go back on their own. When they grow that confidence to go out on their own and show their families and friends how cool and powerful it is, that is something special!
Getting Students Outside More

There are definitely challenges and hoops to go through to get students outside. Often, I feel the most challenging hurdle that educators need to attack is the realization that classes don’t need four walls. You can go outside basically whenever you want, and you should!

Start by setting a tone with students in school that it is OK to go outside, and go outside often. After that, continue to challenge your school community to support each other and begin to grow that culture and community. I also suggest working toward building confidence in yourself and in the experience. Don’t lose sight of the small steps. Don’t skip the scaffolding. We teachers can sometimes have such huge passion for these big adventures and trips that we end up focusing on our own goals, instead of focusing on the kids’ goals. If you do start out with grand visions like a mega trip, mountain summit or once-in-a-lifetime adventure, the students won’t have that day-to-day growth and the scaffolding that build up to the trip. They won’t have the same benefits. Start with projects like growing your own garden and slowly capitalize on the growth that happens from the beginning experience. Each year more and more will grow, then you can plant and expand. Start small. Take your time. And once the group of students believes and the community engages, it takes off from there.

How the Journey Started and Suggestions for First Steps

I was fortunate to have amazing mentors and to be surrounded by very supportive leaders. I would use experts and service providers to go on an adventure with students. I would hire professional guides to come with me and show me games, activities and lessons. After many reps, I thought that I could lead on my own and went for it. Still to this day I have guides accompany me on trips, such as when I go biking, snowshoeing or skiing. I know I can always learn new activities, approaches and ideas. I also do this so students can be around more leaders. They learn to respect not only me as a leader but also other leaders who will guide them in their lives.

Never be afraid to be humbled by experience. These people are experts in their fields for reasons. For example, I was never a big skier growing up. I played basketball and other sports during the winter. I realized early on that I didn’t have to be an expert in all areas. There are people who could help me with this. I used to think that outdoor educators had to have all the expertise and be able to show kids how to light fires, set up tarps, wrestle bears and so on, but you can build capacity if you start in an area that you are confident about. Therefore, if you like biking, go biking first, and then slowly get the guidance and support for other activities. This way, you slowly build confidence in the areas you’re comfortable with and the ones that you need support with. This way you are showing knowledge and growth as an educator.

Ideas for Where to Begin

I began with showing my administrators and parents that I was dedicated to putting in the time, energy and work to make students’ lives better. In terms of outdoor experiences, I wasn’t asking for the world. I would start with a day trip, then an overnighter. It took me a few years to start taking kids to the coast for 12 days. Certainly, the trips were not in my first teaching year. I started slowly. The trips helped show my principal, school board and, most important, myself, the confidence I was gaining. Once you build that capacity, your school community starts believing in you and in the program. Years ago, I would have to advertise to get kids interested in taking trips. Before long, students started showing up in class because they’d heard the stories and they wanted in!

Some of us get caught up in not having the expertise or the equipment. It’s building the confidence that you can get there one day. Find what you’re passionate about. Allow the school community to believe in you, and you to believe in yourself. You don’t need gear to be an outdoor teacher. Be a teacher first, and you’ll get there.

Resources or Ideas to Start With

It’s not about equipment, a book or a resource. Bring your passion. You can make resources, and you can find materials. If you can connect with students, that’s a huge step. It comes down to being yourself and being true to that.
People will gravitate to that leadership, and they will want to be a part of that for a long time. It doesn’t matter if you go skiing or even have skis, or go off in the desert or go surfing. If you’re passionate about it and you sell it to them, they will follow you and believe in you over the activity.

Where Court Finds Himself Now

I feel like I live in an ecosystem. Grades 7, 8 and 9 work together. I have volunteers in the community, from Mount Royal University, University of Calgary and trusted service providers. The Grade 9 students go to feeder schools to help volunteer and lead events. Kids come back after graduating from high school to lead on large trips, so when the students go on the coast trip and other trips, I have leaders who come back to help out. When they volunteer, they have already walked the same trip as the current students are walking. Current students realize that and see that one day they could be a leader, too.

Everything supports each other. If I was to remove myself from that picture, it would all still interact and interconnect. Everything relies on and supports one another.

Getting back to the garden analogy: you slowly work at this garden and after time you start harvesting. These days I can start a new garden space or add more to the side because the original plan is interacting like an ecosystem. I always have new gardens or new projects going, but when I look back I also have this successful thing going that still needs lots of maintenance, care and time. I’m now able to spend time and energy scaffolding resources on new projects and new ideas to grow!

Never-Ending Excitement and Possibilities

I want to show the world that 12- to 15-year-olds are amazing young adults! They can do talented and incredible things if they’re allowed to explore outside the norm of a junior high kid. Unfortunately, sometimes they have ceilings put over them from different shareholders, but they truly can accomplish a lot if you believe in them.

Guide them to find the path to walk on, but allow them to walk their own journey, on their own path, with their own two feet.
Nature Alive Adventures

If you are looking for support with programs to help bring students outside, Nature Alive Adventures can help! Nature Alive Adventures shared some of their expertise last year during our Edmonton Solstice Series. Recently, the founders, Dale and Colleen Kiselyk, joined us virtually for Outdoor Playlist Volume 2. We feel fortunate to have had them share their expertise with us, and the following is information they provided during their presentation.

Colleen has a specialty in music and outdoor education, and is an early education teacher. Colleen’s current position is teaching kindergarten, music and outdoor education. She reflected that, “With COVID, the best place to take kids has been outside to engage in all those areas that I am teaching. The kids love it! We actually have to keep an eye on the time because we just enjoy spending so much time outside. The kids are so engaged that we might end up missing lunch. One time we even almost missed the bus!”

In her spare time, Colleen is active outside a lot of the time. She loves to run, swim, cycle and canoe.

Dale is a passionate wilderness outdoor instructor and has been an enthusiastic instructor to both youth and adult groups since about 1995. He is also a certified canoe instructor.

Who Participates in Their Programs

Dale and Colleen offer their programs to a variety of audiences throughout Alberta. Through Nature Alive Adventures, Dale and Colleen have led schools, youth groups, individuals and families. They offer summer camps and can comfortably handle groups of up to 30, engaging participants by splitting large groups into several small ones. They present at conferences, symposiums, gatherings and rendezvous. They also reach out globally through their YouTube channel. They are located about an hour northwest of Edmonton but are willing to travel across Alberta to bring their programs to participants.

Program Offerings

Both Dale and Colleen are certified instructors in canoe, certification courses and guided trips, and hold certification as instructors with Paddle Canada (Paddlecanada.com). They are qualified to certify teachers to an instructor level.

Nature Alive Adventures teaches bushcraft, survival wilderness living skills, youth snowshoeing and snow trekking, which includes loading gear on toboggans, travelling up frozen rivers and setting up tents with indoor stoves—winter camping! They offer recreational drum circles and set up fire pans that allow them to
teach fire lighting in urban areas. “We’ve held fire lighting contests that students really enjoy,” says Dale. If your school division is able to provide water sports, NatureAlive Adventures can provide certificates and training on lakes and rivers. If you would like to provide your students with this opportunity but feel that you need a little support, they can help. Your students will then be able to obtain certification for completion of various levels of canoeing. If canoeing interests you and your students, Colleen and Dale can also certify teachers as waterfront instructors through Paddle Canada. They have a fleet of 25 canoes and provide all canoeing equipment, including life jackets and paddles. They will even work with you over a period of weeks to build up to a trip.

The Importance of Teaching Life Skills Through Outdoor Education

Those living in Alberta (particularly Colleen and Dale who live in rugged and chilly northern Alberta) are well aware of the importance of being prepared for all types of weather. Understanding outdoor education is an important skill for students to learn, for example, choosing the proper clothing. Colleen says, “Every day at school, I bring students outside, even when it’s really cold.” She says they go outside during blizzards or heavy rain. The only time she’s ever cancelled going outside with students is when bears are on the playground. Her students know that if they are not prepared, they will be uncomfortable. She talks about the importance of layering and teaches them about the type of clothing that would keep them the warmest, instead of buying extra clothes. She gives her students the task of bringing in different types of long-sleeved shirts. Then she tells them that “the clothing will be made of different types of material, such as cotton or wool. I ask the students to wet one arm and go outside. Then they come in and change to a shirt with a new type of material to see the difference. They can feel how material like wool could keep their bodies warmer.” Her students are taught these and other practical skills and tips on how to stay warm and alive if they find themselves caught outdoors.

Working with School Groups

Dale and Colleen offer a variety of opportunities for a diverse set of audiences. As an educator herself, Colleen often gravitates toward working with teachers. She understands the challenges teachers face in trying to get through a full curriculum in the school year and make it interesting.

Dale chatted enthusiastically about how proud they both were of their outdoor classroom. They have outdoor tents that can be set up in schoolyards and parks, which can be particularly helpful in inclement weather, providing a dry space for the kids to warm up, yet still serve as an alternative learning space from the typical four walls of a classroom.

Colleen and Dale often make use of campgrounds, parks, school grounds, farms and crown land that have waterways and forests nearby. When contacted by people interested in their off-site programs, Colleen and Dale are happy to work with them to choose and locate the best local area. This may even turn out to be in the middle of a city with usable natural space. As part of their programs, Colleen and Dale often gather natural materials with students. As Dale stated, “We like to provide hands-on experiences and connect people in an ethical, appropriate way to engage in natural places and materials. I’ve brought all sorts of things to schools to share with students to connect them to the outdoors.” Colleen jumped in to say, “If you ever see a truck pulled over to the side with people collecting cattails or spreading dogbane, it could be us!”

What School Visits or Programs Look Like

Dale and Colleen love to create opportunities for students to engage in the outdoors. To make that easy for schools, Nature Alive Adventures is able to come...
We could come out and provide something to help you get the students in a place that you wouldn’t otherwise be able to do in a school setting.

Other Outdoor Ideas

Dale suggested that educators contact them directly to discuss what they would like to provide for students and how Nature Alive Adventures can best make that happen. They then customize a program to suit individual and specific needs. From canoeing to building a fire or a quinzhee, or cooking bannock on a stick, students will be engaged in practical outdoor skills.

Programs for young students often involve a fun and interesting day of events outside; for example, snow festivals include such activities as snowshoeing, tobogganing with freight toboggans, relays and other cold weather experiences and skills. As Colleen went on to say, “It is a hoot to get young children building quinzhee snow shelters. The kids love it as they are like little polar bears and you can’t get them out of there.” She enjoys engaging the younger children because, as she says, “You ask them to collect three sticks as long as their arm, and they come back with 35 sticks, complete with a snowman attached. What an opportunity it is to be able to bring students to areas where they may have even grown up in but they have not been able to explore, because they don’t have the gear or the initiative to go into those areas. This opens up a whole new world for them.”

Professional Development and Inservices for Educators

Nature Alive Adventures also provides inservice training sessions where Dale and Colleen work...
alongside teachers. “I find teachers, who are not outdoor enthusiasts, can be reticent or reluctant about taking kids outside. They don’t have a whole lot of ideas. They can even be concerned about the weather being too cold. Educators often have many questions about the logistics such as, “What if I don’t have enough hats and mitts for everybody?” or “What if the parents get upset if their kid comes home peppered in mud?” or “How do I deal with the rain?”

We come alongside educators and provide inservice sessions. This gives them some ideas and confidence through the hands-on, surefire ways to have a successful outdoor adventure with kids.

New Resources and Ideas
Nature Alive Adventures has a wealth of video resources for practice and learning that is shared through social media. They have also started developing new resources specifically for educators who work with young students. They look forward to launching a new video series called Nature Minutes. These short videos of recorded nature challenges in action could be used as a springboard for large projects, lesson ideas or mini outdoor lessons. Colleen shared one example of a short video that asked students to look at moss and lichen. The video narrator says, “Here I am on the corner of my schoolyard. Can you take a look at this rock here? What do you think this is on the rock? I want you to go outside and see what you notice.” Using the video as a starting point, educators might then engage students in lessons about moss and lichen in damp areas, or different types of habitats or vegetation on the school grounds. The goal of the videos is to serve as a springboard for possibilities and ideas for experiential learning.

To learn more, please see below:
• Website: www.naturealiveadventures.com
• YouTube Channel: Nature Alive Adventures and #microadventuresca
• YouTube Channel: Nature Minutes: Nature Minutes Ep 1 Introduction
• Facebook: Nature Alive
• Instagram: Nature Alive Adventures (@dalekiselyk)
• Contact Dale and Colleen Kiselyk: Nature Alive (naturealiveprograms.com); phone 780-305-6921
Community Engagement in Environmental Education

In talking with educator James Stuart, it is evident that he and his colleague Graeme Dowdell have developed a program that connects and inspires students to meaningful engagement in community initiatives. The following is a summary of our conversation:

Tell us about yourself and your program.

My name is James Stuart, and I teach at Queen Elizabeth High School in Edmonton. Along with my colleague Graeme Dowdell, I teach Grades 10–12. We were given an extra lab that needed to be fixed up, and Graeme and I were told to “go make something awesome happen in the space!” Since then, we have endeavoured to do so.

The indoor lab space was an old construction lab, which we repurposed. It still has some of the original construction equipment in place. Here, Graeme’s influence is in bringing in 2- and 3-D design and construction. He also brings in robotics and some computer programming as well. Graeme has adapted some of the construction materials and equipment to create 3-D designs. He gets kids to meld together traditional construction equipment with 3-D printers and laser cutters and that sort of thing.

This is only my third year teaching high school. Prior to that, I spent a decade or so teaching Grade 5. For the first two years at the high school I was a department head, and we worked together to physically set up the space and then organize the programming. I started a program of environmental stewardship, as well as teaching a class in horticulture this year. As we are still building the program, there are other classes that I teach in the school. I’ve taught math, science, English language learners and language arts.

What do you enjoy about teaching?

I get excited as a teacher when kids get excited and passionate. Specifically, I enjoy when they get excited about something related to the environment, agriculture or horticulture, and when they take that excitement and turn it into a project that allows them to think beyond themselves. I get excited when students find themselves asking, “How can I take something I’m passionate about to help make our community a better place?”

Last year one example involved a student who received a huge grant. She bought about 140 recycle bins with this grant, and her goal was to start a proper recycling and composting program at school. Her idea was to promote recycling to schools; she worked on how to give away the rest of the bins in our catchment area.

Other projects include kids running our aquaponics system. The idea is that they are growing lettuce. The lettuce is harvested and taken to the Mustard Seed (a homeless shelter in Edmonton). On top of that, they’re looking into using electrical circuit meters to monitor how much energy consumption one harvest of lettuce would take. Each of the electrical loads from the aquaponics system (such as pumps, lights and all those sort of things) are monitored. Each was monitored by putting them on their own separate circuit. The students could measure how much energy a system was using. This in turn could be translated into how much greenhouse gas was being used to produce this food, and from there look at ways to still produce food but maybe use less energy. The students considered changing the timers on the lights. The students were actively becoming conscious users of energy!

There are a few other projects as well. Some students are operating a farm robot, and they are still able to do this project during the pandemic. The farm robot is like a...
3-D printing robot, but it plants instead of 3-D printing. Essentially, students program a schedule for the system to plant and water the seeds. They can program remotely, then they virtually monitor the process to see what is happening with the farm. We have an 8-by-3-foot soil bed, and the robot moves across it to plant on a grid system. The students always seem to know more than me about this process!

The students are questioning ways in which we can grow locally and support and promote local food growing as well as what to do with the food afterward and who can benefit from it. With hydroponics and vertical gardening, a lot of automation is involved. Combining agriculture with robotics and design, Graeme and I can help support students through both of our instructional programs.

**Meaningful topics that connect to create positive actions within the larger community.**

My environmental stewardship classes are structured to address this. The introductory level is an overview of topics (including agricultural technologies, resource management and issues we face globally). After that overview, when kids move into the intermediate and advanced levels, it’s all projects. The students are able to pick something they are passionate about, and they get a choice in what they’re doing. The credits come from the kids being able to learn and share what they are passionate about.

In fact, we have found during COVID that allowing all the students to take home a mushroom kit has allowed us to be engaged and in touch by posting pictures and measuring the progress of their mushrooms.

Planet Mushrooms in Edmonton sells the kits at the Bountiful Farmers’ Market, but many places sell mushroom kits for classrooms, and many YouTube videos are available. It is a great activity to do with younger kids as you start with planting, but you have to spray the kits with water three times a day. Eventually you’ll see a few tiny little buttons coming out of the cracks in the pot. Then the following day, they are 10 times bigger! A few days later and you have a huge crop of mushrooms! It is pretty amazing, and visually it’s a great science perspective to get the kids excited about growing things. Relatively speaking, mushrooms are not that hard to grow, and students can take the idea home and produce food for their families. Taking it back into the lab, we look at how to turn a closet into a mushroom space, which becomes a design challenge for the students as well. They have to look at how to control humidity and ensure that we don’t have any mould. A lot is involved. That takes me back to what gets me excited—kids discovering what they are passionate about that leads them to ask questions. They are finding ways to improve what they were already doing in the lab (like building a retrofitted closet), so people in the future can grow mushrooms. They are working together toward creating a better future.

**Building a program.**

Both Graeme and I are incredibly lucky to have the support of our administrators. We did have to show that we were capable of building something that our principal was looking for. Interest and involvement in our classes keep going up. We look at what the kids are interested in and connect it to credit (including project credits). Our main litmus test is always, How do the kids feel about what they are doing and learning?

**What are your suggestions for educators interested in building an environmental stewardship program?**

Before COVID, I would take kids on nature walks in the river valleys, doing plant identification or bird watching. Even with things as they are this year, I have asked the kids to walk around the perimeter of our school looking at the natural world. For example, we did weed identification on our school grounds. We walked around to find...
different kinds of weeds and tried to identify them. We found one plant growing out of the cracks in the sidewalk, and it looks like a teeny pineapple. We discovered if you pick it and smell it, it actually even smells like pineapple! I called it sidewalk pineapple.

Start with something meaningful like planting a packet of seeds to give students a space to go back to later to check on the progress. You don’t even need a large community garden or project to get started. Everybody can start with this because plant life and vegetation are growing everywhere. Start with the small things that you do have.

Start by engaging your kids and then asking, Did you like that? What do you like about that? Would you want to do that again? How can we make this more meaningful? I think you must always go back and check with the students. What do you want to do? What did you get out of this? Considering the students’ needs first, then addressing the curriculum is the way to do it.

Beginning teachers need to get to that ground first to have a base to stand on before you leap off. I didn’t start doing these big projects until about five years into my career. That’s when I got an aquaponics system for the school. Then I got kids growing food for the lunch program they started. Then we got solar panels for the roof so we could offset the energy we were using to grow food. It becomes a whole circle where what we’re doing connects curricular areas like language arts, math, research and expository writing. My advice is to start with something simple then build on it with students.

Can you tell us more about the lunch program your students run?

Around 2012, my students and I obtained a little bit of money from a government grant that we used to start a lunch program. The program is for students who are in schools not identified as high needs. We wanted to catch the kids who had fallen through the cracks. With a bit of guidance, the students came up with a way to put together a healthy brown bag lunch. We teamed up with a restaurant that was trying to get into supporting schools but was having difficulty. I put those two ideas together. It is now considered a registered charity. Before COVID hit, we were feeding over 400 students. Students would be picked up by a bus and brought to the community hall to do all the work to build healthy lunches. From there the students bagged them, boxed them and delivered them to administrators and staff at other schools. It’s just another opportunity for students to get out of the school and give back to the community. It’s a seed of community engagement and empathy, of thinking beyond yourself.

What advice do you have for building community connections for student engagement?

With the lunch program, two things came together synchronously. I was in a restaurant talking to the owners, and they said they really wanted to help feed kids. They were interested in shutting down the restaurant on Tuesdays and allowing homeless people to come in, but they also wanted to get into schools to help support kids. At the time we also had that grant, so I was able to put the two things together. Sometimes opportunities pop up, and sometimes you have to look around for them too. Be aware and think about opportunities as you talk with people and see different opportunities within your community, but also think about what you are truly passionate about. Are you passionate about doing something to curb child poverty? We are all working with kids so that’s an obvious start. Are you keen about getting kids outside because you’re passionate about the environment and you want kids to appreciate it as much as you do? As an educator, you take that passion and go from there.

If you got a job overseas and you had to start teaching from scratch, what one resource would you take?

I taught overseas for three years (a long time ago), and I didn’t take any teaching resources with me. If you have your phone, you have access to the world. However, I don’t think I would take one thing with me. I would focus on learning how things are done there. If I was teaching in a different country, I’d want to know what they are doing and how can I learn from them. From there, I’d ask how we could learn together. I would take the perspective of an open mind and a learner, then take what you’re passionate about. For example, I am passionate about growing food locally and the different ways and technologies to do that. I’d connect our knowledge and we’d learn together.
You have accomplished a lot after such a short time! Where would you like to go next?

We are in the process of building a community garden at the school to engage our refugee families with our local community and students. Our refugee families have a huge amount of knowledge. They grew food back home, but they don’t have the space now. We’re building an opportunity for everyone to learn from each other. Again, this is all about planting, growing and sharing food, and building that community.

Our goal for phase two will be to put in a food forest that will be populated (in part) by local tree species that are rare and capable of growing in our climate. This would be a tree propagation program. We have spoken with an Elder to look into bringing medicinal plants to the school area or even growing them hydroponically with the students. We hope to be able to support Indigenous communities and build those connections.

We have other ideas, but these support our goal to get outside more, as we don’t have a lot of outside space at this point. We have a very underused courtyard. It was developed as an outdoor classroom a number of years ago and includes apple trees. I’d like to get students engaged in the space. This is my goal. There are a ton of possibilities, and it’s so amazing.
A New Voice in Mountain Conservation: The Canadian Rockies Youth Summit

Ben Green, Lucas Braun, Alex Stratmoen and Destinee Doherty

On a mild November weekend in 2019, 45 high school students, representing 10 communities in and around the Canadian Rockies, gathered for the first annual Canadian Rockies Youth Summit in Jasper National Park. On the agenda were topics ranging from wildlife conservation amid increasing tourism development to creating meaningful reconciliation opportunities within our national parks.

The fact that so many high school students gave up a valuable weekend to meet to discuss such topics is indeed a rare occurrence. What’s even more unique, however, is that this summit was completely designed, managed and hosted by the students, which includes us and other attendees. We are four Calgary students, concerned about how the areas in Alberta’s west and BC’s east are being managed. We took it upon ourselves to create a meaningful learning experience with experts, stakeholders and other youth from across these regions so that we would be more capable of giving input in our own communities as well as provincial and federal efforts.

We were not sure if we would get any buy-in from other students when we sent the idea out to schools. However, we quickly learned that we were not the only ones with such concerns. Something about how these landscapes are changing inspired students from north to south to want to be more involved.

Even with the student interest, we were not sure how we would ever get the summit off the ground in terms of funding, organizing and more. This is where we could not believe how lucky we were to be supported to pursue this idea from not only our parents and teachers, but by conservation and education organizations like CPAWS, Y2Y, the Biosphere Institute, Inside Education, the Canadian Mountain Network, government agencies, the Assembly of First Nations, local businesses, postsecondary institutions and local community foundations and organizations like the Calgary Foundation, the Jasper Lions Club and Jasper Rotary Club. We think these organizations noticed the concerns we brought forward as well as the uniqueness of this student-led initiative and acted accordingly. We believe there is a lesson to be learned here for all youth seeking to create their own conservation initiatives.

At the end of the Summit, we collaborated to write a report outlining our commitment to sustainable development in the mountain ecosystems now and into the future. You can read this...
The document highlights our main concerns as youth growing up in and around the Canadian Rockies and our ideas for solutions to solve these issues. Each community penned their own section of the document with the ideas and concerns of other communities in mind, allowing for every student to have an impact on the final working draft.

Here is a summary of our conclusions and recommendations:

- Youth are worried about the increasing pressures of human activities on some sensitive areas—both protected and unprotected. Youth want to be meaningfully engaged in decision making.
- Youth want to be more involved in the management of these areas regardless of the jurisdiction. In order to make this an effective and accountable decision-making body,
  - work should be done to increase stewardship education to youth;
  - Indigenous youth should be a focus of future co-management of spaces, industries and management plans;
  - youth should have more opportunities to take part in active stewardship through their schools as well as conservation mentorship programs;
  - all Canadian students should learn more about their natural areas, including the Rocky Mountains. Education should be a priority for management. More educational facilities are needed so that more youth can develop strong connections to the land and protected spaces.
- The amount of people accessing these mountain areas is rising exponentially. However, nobody knows exactly by how much. There is no baseline data to show who is coming and what they are doing in the mountains. More information is needed. Youth want to be part of this science.
- Indigenous Peoples have been mistreated in the management of these areas historically, and this is something that Canadians do not know about. This needs to change.
- Indigenous groups should have more input in the management of these areas, especially protected areas like provincial and national parks.
- Industry (tourism and natural resource development) must work more closely with stakeholders to create a shared vision of sustainability in these areas. Science and traditional knowledge must guide the work.
- Wildlife that once made its home in the prairies now only exist on fragmented portions of these mountain regions. These areas are only marginally habitable for many species like grizzly bears. More protected areas should be established that connect mountain regions to the prairies for the sake of many species.
- Climate change will see an end to most alpine glaciers within our lifetime. All students should have the opportunity to see and learn about them before they are gone.
- More user-funding collection options should be considered for provincial parks and Crown land.
- The necessity for BC Parks, Alberta Parks and Parks Canada to provide a youth engagement process for management decisions is essential.

Most important, the summit proved that youth have a desire to get involved with management and planning of these areas. We need readers of this article to step forward to help us facilitate this. We hope that those reading this will reach out to their networks to help us to facilitate the ability to help control the management of our own future.

This student-written piece is reprinted with permission from the Alpine Club of Canada’s 2019 State of the Mountain Report. Minor changes have been made to conform to ATA style. The students attended the energy and environmental innovation class at Central Memorial High School, in Calgary, Alberta. Adam Robb, their teacher, helped with the editing of this article.
Educator Anita Vahaaho is always developing new ways to share and explore how to engage students in learning in natural spaces. This includes developing a schoolwide winter carnival (organized with the school’s French specialist Nicole Deteau). She has also organized a schoolwide Indigenous Games with the Calgary Board of Education Indigenous team. Anita Vahaaho was kind enough to answer our questions about getting students outside and to discuss her ideas and suggestions for others. She has also shared some of her planning for an outdoor games day.

Where and what grade do you teach?

I have been teaching physical education (PE) at Edgemont School (K–5) for the past six years. I started teaching 13 years ago after transitioning from an education assistant. I began in the role of a Grades 5/6 classroom teacher, and after teaching in a couple of different schools and four years into teaching, I wanted to try teaching PE. I spent three years teaching PE at West Dalhousie in Calgary before moving to Edgemont.

What are you passionate about in teaching? What are some lesson approaches or ways of teaching you feel are meaningful?

I’ve always taken the approach that PE is more than just sports. I saw many kids disconnecting from physical activity, even at a young age, because they did not feel they were good at playing soccer, volleyball and so on. PE is about connecting yourself to the idea of being active and what that means personally. This can look different for each person.

My approach to PE comes from a memory I have of a girl in my PE class in high school. She played and worked hard in class every day. She was not the most coordinated or athletic person, but the energy and effort she had was always 100 per cent, even when her marks didn’t always reflect that. She was one of the few who persevered even though PE focused very heavily on sport. Unfortunately, kids can disengage from PE when only presented with these types of experiences. I feel that my job is to provide a wide variety of experiences for students that build those physical literacy skills required for both sport and overall coordination, but in ways that are not completely or heavily focused on the specific sport itself. It shows kids that physical activity can be fun, engaging and simple. This isn’t to say that I don’t focus on specific sports throughout the year; it is done in a way that takes the focus off the sport itself and looks at the skill and the fun that can happen.

I am also very passionate about outdoor PE! I can’t say this enough: kids need to be outdoors and experience physical activity in an outdoor setting. This is the one thing I am thankful for with COVID restrictions; I am able to run my PE classes outside all year without having to try to convince others why it is important. Fresh air is so vital to a person’s health and wellness, particularly for kids who spend so much more of their free time inside.

How does your curriculum gain more depth and meaning through these approaches?

I think it helps kids to view PE in a different way. It allows them to see that such skills as kicking a ball can be important in ways other than just to play soccer. It can also introduce them to a sport that they may not have even thought of trying before.

I have always taken the approach of what can be done inside can be done outside. I take all sorts of equipment outside (bean bags, gym benches, mats and so on). When possible, I try to use equipment that is not brand new, but, ultimately, I would rather students have the experience and learning opportunity than worry if the
equipment is going to get dirty. It can always be cleaned. This year, I’ve really tried to focus on games that do not use equipment to help students learn games that they can play at home, when they are camping or at the park. At times, we use natural equipment, such as sticks, rocks and so on.

Can you share how you overcome some of the challenges teachers face with getting kids outside? For example, how do you ensure students have proper clothing and stay safe?

There are challenges with being outside as far as clothing. All I can say is that you can only do so much. We try to educate students and their families about the need to have appropriate clothing, particularly in the winter, but there are always kids who show up without gloves, good footwear and so on. Borrowing items from lost and found when appropriate, trying to get donations for winter clothing and keeping a stash in the main office, making personal phone calls to specific families and sometimes just letting them experience a class outside without mitts or toques (keeping safety in mind) are ways to help combat those challenges. Ultimately, you can’t control everything.

In my opinion, safety is not an issue when taking kids outside. Being aware of the environment, mitigating risk when necessary, and lots of discussions and learning with students are needed to be successful outside. If kids never have the opportunity to engage in activities that might be somewhat risky, such as play in the field when it is a little icy, then they will never know how to use their body to be safe.

What is one thing other interested educators could try to get kids outside?

Before you even start, the first thing is to get a buy-in from your administration. If they do not support your desire to be outside, then you will not have support from your parent community, other staff or even students. Outdoor PE almost needs to be part of the culture of your school to be truly successful. When everyone understands the benefit and buys into the need, there is less resistance from school staff, which then trickles down to students and families. If you are a PE specialist who is finding resistance from staff, start with those classes where you have the most support from the classroom teacher; or even just start with the older grades first. Also, go back to the curriculum; it will support your desire for outdoor play.

When you do go outside, start small. Play games without the need for equipment, such as tag, long distance running (or sprinting), relays in which they perform various locomotor movements and so on. Teaching traditional Indigenous games are great to play outside—so many connections to be had! Build your way up from there; introduce equipment that is easy, such as balls, Frisbees and so on.

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

I would take my own sense of adventure and interest to learn about the place and culture I would be visiting. I would want to know the games they play before even considering what I could teach to them.

What projects or ideas are you thinking about doing next?

I continue to look for different ideas for games without equipment that students can then play on their own. COVID changed how we did things in school, and we held off on giving students recess equipment. I noticed that they didn’t really know what to do with themselves. I hope that students will have a large repertoire of outdoor games they can play.

Anita shared with us a few of her suggested outdoor games. The name, who the game was originally developed by, a brief description and the required materials are provided.

The games have been inspired by Dene Games: An Instruction and Resource Manual, 2nd ed, Traditional Aboriginal Sport Coaching Resources Series, Sport North Federation and MACA (GNWT), Yellowknife, NWT, 2006.
MITTEN GAME
(Han and Gwich’in)
Players sit in a tight circle with legs touching the mitten while players pass it. Player who is it stands in centre of circle and tries to guess location of mitten while the players pass between their legs.
Players sit with legs touching on both sides of body (tight circle).
Materials: Mittens

POLE RACE
(Gwich’in and Koyukon)
Test agility and balance: physical skills required for hunting.
Players attempt to cross the stream by jumping from pole to pole that are driven into a river or creek bed. Jump from one poly spot that is on the floor to another.
Materials: Poly spots

BACKPACK RACE
(Slavey)
A race in which students carry weighted backpacks to test speed and strength.
Players carry backpacks full of rocks and try to race each other.
The race can also be played as a contest to see who can lift the heaviest pack.
Materials: Weighted backpacks

RUN AND SCREAM
(Blackfoot)
Traditionally used to teach turn taking, tolerance, patience and the importance of lung capacity in everyday life.
Players take a big breath of air and start running while screaming out loud. Players stop when they can’t scream any longer. Person who can run the furthest while screaming wins.
No materials needed.

HOOP AND POLE
(Gwich’in, Slavey, Han, Dogrib, Koyukon, Deg Hit’an)
To test agility and accuracy needed in hunting.
A player throws a spear or shoots an arrow (pole) at a hoop rolling on the ground.
Players throw a spear (pool noodle) at a hoop rolling on the ground.
Materials: Hula hoops

SLING BALL
(Northern Cheyenne)
Great activity for core strength.
Sit on ground facing away from the activity space.
Tail of the ball is pinched between feet (or two big toes). Participants roll on back, raise legs and sling ball backward over head.
Materials: Ball with rope attached
We gathered our journals and pencils before heading outside. It was our weekly nature journal time (one science block a week dedicated to observing outside). Most of the students in this class were out because of a close contact. Two students escaped that fate. The three of us ventured outside; my plan was to look at the fence line for signs of wildlife. Instead, these two students took an interest in the rocks they found in the field. It wasn’t what I imagined that lesson to be on, but watching them get excited about the variety of rocks they found was inspiring. We discovered red rocks, brown rocks, large rocks, small black rocks and a variety in-between.

Our journals were easy from that point on. We always focused on three things: I wonder . . . I notice . . . and It reminds me of . . . As we looked at the rocks and their differences, one student noticed that he could make a yellowish-brown mark with one of his rocks. He coloured in his drawing of that rock with that rock’s natural pigment.

Students deserve the chance to experience the outdoors. I heard a saying once: “How can we expect the future generation to save nature when they don’t have the experiences to love it?”

These students experienced a connection to the outdoor world. Yes, they may have already liked rocks, but they developed a new connection to the small yard in our school. They were excited and involved, and were interacting with our small piece of nature.

Students need to understand the world they live in. Yes, we can show them pictures and talk about nature, but without experiencing it, how are we to find the next group of geologists or biologists?

Nature journaling is one small action I am taking, inspired by Take Me Outside (takemeoutside.ca), to get students to look at the small pieces of the world around us. Sometimes we must look at the big picture of how things connect. Part of being a scientist is the act of observation and drawing conclusions while asking more questions. What better playground to explore those aspects than the outdoors?

Samantha Ur works in The Sturgeon School Division and is the nature lead for her school. She is passionate about the environment and getting kids involved in the outdoors. In her spare time, she likes backpacking, walking in the river valley with her husband and dog, and attending as many GEOEC events as possible.

An outdoor connection to Alberta grasslands.
An Interview with
Tyler Dixon

You’ve had an interesting career as an educator. Can you tell us about it?

I teach at Marshall Springs Middle School, in Calgary, which is a Grades 5 to 9 school. The school opened four years ago, and I have had a lot of fun because I was part of building a new school culture. I started teaching physical education there. Since the first year, they’ve added outdoor education, which I also teach and have been trying to build from the ground up. There have been tons of challenges but also lots of fun at the same time! I can mould the program and do what I want with it. It’s grown from one mixed class to two full grade classes, and they’re looking to add a third class as well. I enjoy teaching phys ed, but outdoor education is my true passion.

I started teaching with the Calgary Board of Education (CBE) in 2006. I was at the Enviros Base Camp, a specialized satellite program for the Calgary Young Offenders Centre. Having to do with addictions-based treatment, it was a three-way partnership between CBE (which supplied the teachers), Alberta Health Services (which provided the funding and some counselling) and Enviros (which is a not-for-profit in the city of Calgary that staffed it and ran the day to day). It was all experiential, adventure programing. There was lots of outdoor education (which was fantastic), coupled with the treatment side of drug and alcohol addiction. It was a unique program; I’ve seen nothing like it before or since.

Unfortunately, the funding for the program was pulled last year, so the program does not exist anymore, and they’re looking to do something else with that space.

That’s where I got my start. I was out there for eight years. It was a tough choice to leave, but I was living on-site, with my wife and family at home. I transitioned into the city to West School, which is inside the Young Offenders Centre, and I taught inside the jail for almost three years. It did have its unique set of challenges: obviously, no outdoor ed inside the jail. I was teaching half and half phys ed and language arts. I had done a lot of language arts and social studies out at Base Camp. It was interesting teaching it in a different setting. Finally, the good thing is that their numbers were continuously down (in terms of how many students were there and how many people were inside the building). Unfortunately, that meant there was a surplus, and I was invited to leave. I loved working with that clientele. I wasn’t ready to leave, but I was lucky that I landed in a really good position. I ended up at Marshall Springs, and the staff I am now working with are incredible. I
have a super supportive administration team that allows me to do outdoor education.

As a new school, my administration talked to the teachers and found what they were interested in and passionate about. They didn’t want to throw teachers into a situation and wanted them to be able to teach in an area that they felt passionate about and comfortable teaching. From that, they put together a list of options that they knew the staff were comfortable teaching. I was the outdoor education teacher, and I was on the list of options for students. Students are able to pick their top four choices. There was enough interest that first year, then word spread from there. Students learned that they could go out to the mountains and go skiing. Word spread quickly, and the next group grew from there. I now have a Grade 7 and a Grade 9 class that are keen. I’m finding that a lot of students are taking the class a second time. This presents its unique challenges because I get a split class. For example, I have a part Grade 9 class with students who have already done basic skills with a Grade 8 class that is new. I’m finding ways to teach new stuff while extending the students who are taking the class again. It’s been a fun challenge and nice to hear the kids who have already taken a class say that they want to take it again.

Can you describe an outdoor activity that you did with students at the Base Camp?

At Base Camp, the kids mostly came from urban centres. Most of them had never been in the woods before. Wildlife was a huge fascination but also a fear for them. As part of their treatment choices, they were given an opportunity to do solo time. They started small, sitting by themselves for 15 minutes without anything. They could work up to longer times, such as 24 hours in the woods. Wildlife was often the number one fear, so we decided to build in a wildlife education piece to alleviate some of that fear. That is where the trail camera program started for us. We started by looking at what was actually around camp that we don’t see normally. That was awesome, because we discovered that grizzly bears, cougars and wolves were walking around camp all the time even though none of us had seen any of them. From there we decided to bring in some things for the kids to have hands-on experience with the wildlife. They could look at a picture of a wolf, but holding a wolf skull and touching wolf fur made it much more real for the students.

What are you most passionate about as an educator?

I am most passionate about getting kids active outside. When teaching phys ed, I’m all about time on task. I find there is a bit more instruction in outdoor education when I’m trying to teach certain concepts and skills. I think standing up and teaching is what the kids hear all day. Therefore, when kids come to see me, I want them to have their chance to get out, be active, burn off some of that energy and sweat, and engage in a different way than they are used to. To me, it’s about how I can get as much physical activity into that 55 minutes with them as is humanly possible. I limit my instruction as much as I can. I have been trying to limit the amount of stoppage time once they are out and active. With COVID and all the cleaning, it’s even more important for the kids to have that active time. Right now, with COVID, I’m reverting to activities that the kids know, so I don’t have to do as much instruction. The kids can just be there and play and engage. This is always like a mental chess game with me because I always want to teach them new stuff and build on things that they learned last year, but how much time do I take out from their actual activity time? I don’t want to have to explain for 10 minutes, then have them go back inside. I do realize it’s a different game in a different world right now. COVID has been good in the sense that people realize the importance of being outside.
How have you been able to overcome some of the challenges some teachers perceive in getting students outside for learning?

For me, I was thrown into it when I started. It was just the nature of the program that I started with. We were outside regardless of temperature. CBE’s outdoor cut-off is −20° Celsius. At Enviros Base Camp we didn’t have those limitations; a lot of it was a necessity. The cabins were heated with wood, so if it was −40° they still had to go out to collect firewood. We were outside just for a necessity.

I found at Marshall Springs (or any other regular setting), I needed to start with baby steps. If you are not comfortable, I would advise to start with short times outside and build up. I’ve also heard comments from people who have covered my class. They often ask, “How can you deal with the chaos and be OK with it?” I feel that you have to be OK with not being confined to four walls; you don’t have desks, and the kids are up and moving around. You have to be OK with the kids moving around. And, yes, it looks chaotic, but it’s not necessarily. It truly is an organized chaos! You have to step out of the comfort zone of your classroom. I realize my classroom outside does not have those kinds of confines. Kids can get up and move around and be wild (for a lack of a better term). That doesn’t bother me in the least. I think it’s fantastic when kids are like that!

You have to let the worry go about not wanting kids to get hurt on your watch and understand that kids will play and get hurt, and it’s not the end of the world. Realize that the injuries that could happen on a schoolyard are pretty slim, and let that go. Find a way to let things happen and play out in the way you didn’t expect, but that’s what the kids want. It’s a free feeling, and I love it! Like I said, I’m outside all the time and every day. I can say to the kids, “Go! I’ll meet you at the baseball diamond.” It’s like chaos watching them go from the school to the baseball diamond, but they all get there.

How do you address outdoor curriculum expectations?

There is a middle school outdoor education curriculum that is pretty bare bones, but I like that it is, because it gives you flexibility. There’s not a huge curriculum that dictates what the program has to look like. I think that’s the beauty of outdoor ed because when I talk to other outdoor ed instructors, it’s inspiring to see how they’re taking
up that learning. Some teachers are doing fly-fishing, but I don’t have the skill set to do that. They can be passionate about something that they can link back to the curriculum. They can get to those same outcomes through fly-fishing that I’m getting through snowshoeing. I think that breadth of possibilities and experiences are just positives for the kids who are enrolled in it. I have the activities that I’m passionate about, and I know a lot about.

I start my classes with a journal asking students why they took the class, what they’re hoping to get out of it and what they like to do outside. It gives me a baseline of who I have in class and where they need to go. For example, perhaps none of them have gone skiing before, then I know I will probably go to Canada Olympic Park instead of Nakiska. Sometimes I’ll have a group of kids who say something like, “I like going dirt biking.” Then I think to myself, I could work with that. I’ve had kids say that they like going hunting with their dad or uncle. I don’t have that experience, but I think of ways that their skillset can be built in. I love the endless possibilities that you can come up with in this program of studies. It can be as simple or as complex as you want it to be.

Don’t worry about the stuff that you don’t know. What are you passionate about, and what do you have the knowledge base in? Start with that. When you’re passionate about something, kids get it and they see that. They buy in more when you’re into it and you can show them how cool that thing can be. They buy into it for sure, then build from there.

If you had one thing to start with, what would it be?

I would begin with flexibility and an open mind. I would also start with knowing where I am and who I’m teaching and go from there. I don’t think there’s one resource tool or piece of equipment.

An icebreaker or team building activity is a good place to start. A suggestion is a game called, I Have Never. Everyone starts by sitting on a chair in a circle with one less chair than people. Someone stands up and says, “I have never,” and says something that they’ve never done; for example, “I have never gone skydiving.” Then everyone in the group who has gone skydiving would stand up and change places quickly because there is one less chair than people. Obviously one person would be left standing. That person then gets to say, “I have never.” It’s a great way to get to know the kids. I have sometimes put a theme on it, such as outdoor sports or outdoor recreation or camping. Whatever the theme might be they have to stick with it. I have seen it get out of control with high school kids, so some stipulations and rules at the beginning are the way to go. It gets them moving and gets them to know each other. It allows me to see where they’re coming from, their level of venture, their level of risk and what they’re comfortable with.
Can you tell me about the Calgary Captured project that you’ve had your students looking at recently?

Calgary Captured is city science project asking citizens to identify animals. The program is trying to discover what species are where in the city. Cameras are set up across the city’s green spaces. Anybody who has a curiosity or wants to help out can go to the Zooniverse website (www.zooniverse.org/projects/calgary-captured/calgary-captured) to help identify animals. Basically, you look at an image and identify it. If you don’t know the difference between a mule deer and a whitetail deer, the site will help you. The images are crowd sourced, so if you’re not sure of an identification, you do the best you can. Then they have several people see those same images to check again. Finally, the photos are narrowed down for scientists to look at specifically. This helps them organize and categorize based on location. They have just put out their first set of results, which was interesting to see because they had a chart of all the different species they have categorized and all those different green spaces that are used by wildlife. This project has been going for a while, and they have a ton of data that they need to go through. It gives the kids a chance to see that big animals are found in the city, not just rabbits and squirrels.

What projects and ideas are you thinking about working on next?

When I started I didn’t like teaching split classes because I knew the kids would be taking the same thing the next year. I wondered how I could balance teaching those foundational skills, but then also build skills for the returning students. In my perfect world, it’s a straight Grades 7, 8 and 9 program. I would start the kids in Grade 7 and develop that baseline set of skills. Programs would start with city-based trips and one longer trip somewhere (such as a conservation area like the one close to our schools). We could do things in Fish Creek, which we could walk to and build that baseline set of skills, then build the tasks and the length of trips through the grades. The ski trips that we start at Canada Olympic Park (COP) could progress to more adventurous trips at Nakiska (which is bigger...
Skills built in our schoolyard would then be transferred to practical use. That’s what I’m always trying to do: take that next step with them and show them what the next step might be.

and has more complicated terrain. Then in Grade 9, we could do an overnight trip for those kids who have been there in Grades 7 and 8 (same thing with hiking or mountain bike trips).

I love the biking culture that I’ve built at the school. I’d love to do bigger trips with them, but they need to build their breadth of skill. It’s such a range, from kids who have never ridden a bike before, to kids who are riding in the mountains with their families on the weekend. I can’t take them all out on my own, so we go to COP and do the bike program there. This way I can match them with their own skill levels.

I’m now working on trying to build on the set of skills that I’ve already introduced. I’m working on how I can grow it from there so that their experiences reflect their skills and where they’re at.

What advice do you have for educators looking to build up the gear needed for their program?

Having a fleet of bikes has been awesome and to have them donated is even better. I’ve been able to get donations of bikes. I’m also thankful I’m at a school where students mostly have their own bikes. I’ve asked students to bring their bikes to school to bike in our neighbourhood. The kids love it! They often ask if we’re just going to bike around our neighbourhood. I’ll tell them that we’ll talk about it and build the skills tomorrow, but we’re biking and getting out today.

What I am learning in my third year is that bikes need maintenance, and maintenance requires time. Bikes are not complicated to work on, but it does take time and tools. It also requires some money to replace broken cables or pieces on the bikes. I have learned that if you want the program, you need to build in that time. I’m starting to develop a time that the kids can come in and learn how to fix bikes. It’s sneaky for me, because then I get the support, but then they learn the skills and it gets the job done. Working with these kids made me realize that they don’t know how to change a tire, which is an important skill to have when they are biking, particularly in the mountains.

Other advice I’ve heard from outdoor education teachers is that lost and found can supply teachers with toques, mitts and even jackets. Teachers have washed the jackets and stored them for kids that show up for trips without the proper gear.

I know that people have applied for grants to buy equipment or asked for donations on Kijiji. There are a lot of ways to go about it, but at the end of the day, money is tight in education. To buy a class set of sleeping bags or things that you need to go on a camping trip is a lot of money and a big investment. Often kids say that they have a tent or a sleeping bag at home, but I don’t know how reliable that tent or sleeping bag will be when we’re actually out there. You need proper equipment that will stand up to not only the weather but also the abuse of 30 kids year after year. It’s a constant game of maintenance and repair. Again, start small and work up to it.

One thing that I have built is a resource kit of natural things for the kids to explore. As I’ve mentioned, this started at Base Camp. I posted an ad on Kijiji and connected with people who were willing to donate. First, a trapper donated a coyote skull at no cost. Next, somebody donated a raccoon pelt. Then we were contacted by someone whose uncle was a taxidermist. He passed away and they were willing to donate. Alberta Fish and Wildlife came and checked first, but we ended up with a truckload of pelts, moose antlers and stuffed animals. The next day Base Camp looked like a hunting lodge! It was unreal! Through social media, I have been able to connect with people who would truly like to pass on the love of nature to kids. My wildlife resources have grown; I’ve developed this through putting in a little of my own time and connecting with people who really care about nature. I have also had the support of Alberta Parks and the Alberta Conservation Association. So many people and organizations are willing to help and support youth!
What makes teaching outdoor education to Alberta students so valuable?

A prominent mountain by Base Camp can be seen on the horizon from almost every angle. It’s called Black Rock Mountain, and there’s an old fire lookout on top of it. I remember the first time I brought students to the top, which is a massive undertaking. The freedom I had at Base Camp to allow me to take students there was unprecedented, and seeing the kids’ faces the first time they summited that mountain made me understand why I did it. The drugs and alcohol didn’t matter. The school work didn’t matter. The fact that those kids who have never climbed a mountain of any stature, let alone a pretty massive peak, made it was amazing. It took a lot out of them to get there, but they overcame that hurdle. Seeing their faces after getting to the top is exactly the reason I do this, although this has changed over the years. I get the look, but I also hear them say, “I need to get this on Instagram.” Besides the look, I also hear them say, “This is an incredibly unreal feeling.” After each spot they feel, I can hear them say, “This is an amazing viewpoint and is Instagram worthy!” When they get to the peak where the view is even better, it just blows their minds! I love seeing that! They pull out their phones to take photos. (I don’t mind that they bring their phones because there’s no service out there anyway.) They may not have seen that before. It’s something new and it’s exciting. Kids talk about it on the bus on the way home. They share it at school. The next week kids come up to me in the hallway and say, “You went snowboarding! or “You went to this place!” I love seeing the reactions! I love seeing their faces! All the planning and the paperwork are worthwhile when you see them in that space outside doing something that they thought perhaps they couldn’t do or didn’t even know what it was all about.

For more information, visit the websites below:
- Calgary Capture, Zooniverse: www.zooniverse.org/projects/calgary-captured/calgary-captured
- Nakiska Sports Ski School: https://skinakiska.com/purchase/telus-winter-sports-school/sports-school-ski/
- Mountain bike programs (Windsport) at COP: www.winsport.ca/explore-winsport/off-season-activities/mountain-biking/
Wild Jobs is a running series that focuses on people in outdoor-related professions. It provides a brief snapshot of their career and the duties that it entails.

Whitewater rafting is a fantastic way to experience a fast-paced river. The large volume boats, coupled with an experienced guide at the helm, allow you to confront some gnarly waves head-on and live to tell the tale. Anyone who’s been on a rafting adventure can attest to the unnerving feeling of approaching that first wave and then having that discomfort morph into exhilaration and anticipation of the next one!

Living in Calgary has afforded me the opportunity to raft several rivers including the Kananaskis, the Kicking Horse, the Fraser, and the Adams and each time I leave wanting just one more set of rapids. Recently I had the pleasure of chatting with Dave Pearson and Matt “Clarky” Clarkson of Canadian Rafting Adventures about their company, their favourite rivers and what it’s like being a raft guide. Canadian Rafting Adventures (CRA) was founded by Ben Thackeray and the aforementioned Pearson back in 2009. Clarkson and Pearson have rafted all over Canada and the world for over a decade, and after meeting one another in the Bow Valley, they decided to join forces and deliver the best parts of the rafting industry to their paying guests. The adventure started on the Highwood River, a tributary of the Bow River in southwest Alberta and has since grown to include rivers in British Columbia and the Yukon.

What sets CRA apart from all the other companies out there?

At CRA the owners are your guides! Primarily it’s just us (Dave and Clarky), but we will personally hand-pick additional guides when needed for larger expeditions, such as those in the Yukon. These contracts

Over the years I have seen the good and the bad in the rafting industry. I have worked for companies with poor standards who only care about the number of people on the river, and I have worked for companies who have a great commitment to their standards. Dave and I figured it was time to create a company where the focus was 100 per cent about the experience.

—Ben Thackeray
guides are just as committed to the experience as we are; we know them and trust their abilities on the water. We also like to keep our trip sizes small when compared with other guiding companies. The small size allows us to really get to know our guests and ensures we can make each trip as meaningful as possible.

**What skills or training does one need to become a raft guide?**

You might be surprised to learn that there is no governing body for raft guides in Alberta, and essentially there isn’t a raft guide certification available. That being said, all of our guides are trained and certified in swift water rescue and have their Wilderness First Aid or equivalency before leading any trips. Experience counts for a lot in this business and our team has a lot. We also do in-house training with each of our guides, also known as guide schools, where they learn the intricacies of the river they’ll be guiding on. In terms of specific skills, strong and effective decision-making skills are essential. Rivers change all the time, whether it’s the water level or features moving around, so even if you’ve guided it hundreds of times it can look quite different, and you need to be able to make important decisions on the fly that can affect the whole experience.

**I know there are different classes of whitewater (Classes I to VI), so what classes do CRA trips usually involve?**

This is all dependent on the river and the group. Typically we can have anything from Class I to Class IV. There are very few companies out there that will run Class V, especially in western Canada where our rivers are extremely cold. It used to be assumed that Class VI was not runnable, but today with the way technology has progressed and how far humans are pushing themselves, it has been done. Although, the guys running Class VI are sponsored by companies like Red Bull, and if they make a mistake they’ll end up dead!

**Do your guests need any prior skills or knowledge to take part in a trip? Are there any age restrictions?**

No, guests don’t need any prior skill set or knowledge to be able to enjoy a rafting trip. We’ve had children as young as five on board a raft, but those trips are usually on Class I or II rivers as opposed to bigger water. It all just depends on the children, their guardians and what they’re comfortable with. The toughest part can be determining whether the child (and the guardian) understands the associated risks, and that they may end up swimming in cold water at some point during the day.

**What’s the best river in the Calgary area for whitewater rafting? What makes it so special?**

The Highwood River, and we’re not just saying that because we operate on it! The Highwood is filled with lots of really fun rapids from beginning to end, plus you have the unique Alberta scenery. You start off...
driving through cowboy country with rolling hills and farmland, but the Highwood is running through a canyon, so you get a completely different perspective on things once you’re inside the boats. The landscape changes, the wildlife changes, it’s beautiful. Instead of cows you get moose; we tend to see a lot of moose during our Highwood trips! Due to fluctuating water levels, we can only operate on the Highwood during the spring runoff. Usually there’s a six-week window where we can run trips on that river, so keep that in mind if you’re planning a trip next spring.

The other river in Alberta that is absolutely fantastic is the Ram. We put in below magnificent Ram Falls and continue down the river, portaging around two additional waterfalls. The Ram is also very dependent on flow rate and it can often be too high to raft it safely; however, this year the water level was too low for trips to happen. It’s been a drought year in this part of the country for sure. If you don’t mind a further drive, the Kicking Horse River that runs through Golden is also worth the trip.

CRA isn’t limited to just Alberta rivers. What other rivers do you currently operate on?

Outside of the Highwood and the Ram here in Alberta, we also offer multiday expeditions on the Babine/Skeena and the Nass Rivers in British Columbia, as well as the Tatshenshini River in the Yukon.

Whitewater rafting is an inherently dangerous activity. How do you minimize the risks associated with this sport while on the river?

We try to mitigate risk in a number of ways. We meet or exceed the industry standard in a variety of areas. We are fully insured and all of our guides are adequately trained to handle emergency situations. We use top-of-the-line gear on all of our trips, including the gear our guests receive, and all of the gear is kept in top shape. Before we ever get on the river, all guests receive a safety briefing about the dangers of moving water and what to do should the boat capsize.

What’s your ideal means of travelling down a river (raft, canoe, kayak, SUP and so on)?

That all depends on the river. Each of those are better for different reasons; it just depends on the river and what you’re looking for. If it’s a slow-moving river without many obstacles, a canoe is always nice, but if it’s fast with varied features that you can play in then a kayak might be best. But how can you argue against a raft and all the thrills that come with it? Choose wisely, though, and you’re sure to have a good time!
I would like to point out that several of CRA’s expeditions take guests to a very special place known as the Sacred Headwaters. This area, about the size of England, is currently an undisturbed environment that has great cultural, economical and environmental significance to the people who live there. Unfortunately, the Sacred Headwaters are under threat of large-scale resource extraction and development that would destroy its integrity. The CRA are proud supporters of the Skeena Watershed Conservation Coalition and 5 per cent of all trips on Sacred Headwaters rivers will go directly toward efforts in protecting this important site.

If you’d like to plan a trip with Canadian Rafting Adventures or just want to connect with the crew, please visit their website or find them on Facebook, Twitter and YouTube. I’d just like to take this opportunity to thank both Dave and Clarky for taking time out of their busy schedules to meet with me and make this story a reality. I hope that one day we’ll find ourselves sharing a raft on one of Alberta’s wildest rivers!

Reprinted with permission from the author Tyler Dixon and the Calgary Guardian. First published July 26, 2016, as part of his Wild Jobs series published in the Calgary Guardian. To see the series of articles, please see Tyler’s Twitter account @tcdixon. Minor changes have been made to conform to ATA style.
Educator-Explorer Exchange

Alison Katzko

National Geographic certified educators can participate in a collaborative one-to-one basis with a National Geographic explorer partner during an entire school year. Applications take place once a year and a handful of lucky applicants get selected.1

My name is Alison Katzko and I teach Grade 5 in Calgary. I am the editor for Connections and a National Geographic certified educator. I’m so happy to have had an opportunity to have my class work with Zeb Hogan in the explorer exchange. It is exactly what I am looking for as an educator—meaningful connections that inspire my students. Zeb Hogan is an ichthyologist, conservationist and television host of the show Monster Fish.

That year our classroom inquiry started as: How can we know the world in order to make a positive impact? The plan to connect our explorer exchange partner with the curriculum was: Students will be able to recognize opportunities where they can make a difference, conduct research and implement action that is of value. The Grade 5 wetlands studies in science connected well with the explorer exchange. As an educator I planned out how other curricular areas could be woven into this meaningful opportunity. Below are our outcomes in science:

Students learn about wetland ecosystems by studying life in a local pond, slough, marsh, fen or bog. Through classroom studies, and studies in the field, students learn about organisms that live in, on and around wetlands and about adaptations that suit pond organisms to their environment. Through observation and research, students learn about the interactions among wetland organisms and about the role of each organism as part of a food web. The role of human action in affecting wetland habitats and populations is also studied. (Alberta Education 1996)

We began by looking at what interview questions we could ask Zeb Hogan. As a teacher I wanted to jump into the rich questions about science and forgot that questions about just getting to know someone were more important for the students; for example, Where is your favourite place to travel? Do you eat the fish you catch? Why did you become interested in fish? It was soon evident that it was important for the students to learn the difference between in-depth questions and surface questions (those we could look up on the internet). Below are the guidelines we used:

Thin/Closed Questions
• Found on the internet (who, what, where, when, how)
• Answered with a yes or no, or one word

Thick/Open Questions
• Focus on a person’s personal experience (What inspired you? What has impacted you?)
• Make comparisons for a better understanding (How is ____ like ____?)

We discovered Zeb Hogan was guided by an inquiry. He wanted to know.

My work focused on the search for the world’s largest freshwater fish. In total, there are over 30 different kinds of freshwater fish that grow to at least 6 feet in length or over 200 pounds. These fish are found in rivers and lakes all around the world. I would like to learn as much about these fish as possible in order to share their stories with others and help to protect them.

—Zeb Hogan

From this process we determined that as a scientist, Zeb Hogan
• was inspired by what he saw (on the news) and was excited about problems that needed to be solved;
• asked questions and generally wondered;
• searched on the computer and in books, but he could not find answers to all his questions;
• conducted his own research (found information and proof, used tools, went places, got help by talking to people and experts);
• spent more than 10 years getting answers to his questions;
• shared his research and is trying to make a difference;
• found some answers, but then he got more questions so he went back to step one.

Following the Scientific Process

Next we looked at what our class could do to participate in the scientific process to live Zeb Hogan’s personal process. As a teacher, my hope was that if I could foster student curiosity about their local environment, and about Zeb Hogan’s work, they would gain a sense of responsibility and empowerment that would support them in identifying, connecting to and helping solve local water problems.

In the months that followed, the class began the inquiry process.

Be Curious and Ask Questions

First the students asked a lot of questions! We started the school year with going outside recursively to observe and learn from the land. This led not only to many questions but also to the students feeling very comfortable being outside and prepared to be observers when we went to the local wetlands.

We have a grasslands area on the edge of our school grounds. At the start of the year, the students found a sit spot that they revisited every time we went out.

Seeing how big fish species can get.

The students were supported with tasks or questions to guide their observations. At times they were also encouraged to just be present, not documenting but spending time looking and listening.

We also learned a great deal from our classroom fish tank. Usually my class raises trout and releases them; however, the whirling disease was impacting trout locally. An important discussion about fish health and local water health took place. We learned about the important balance fish need to survive and aspects that affect them. The students discovered key information about the relationship of a healthy habitat and the responsibility of caring for fish.

Developing a sense of space and science observation skills.
During their studies, the students spoke at a local aquarium society to over 150 people about the importance of healthy waterways. They shared what they had learned from our partnership with Zeb Hogan as well as what they learned from our classroom fish tank. The students were pleased to know that the presentation was well received.

Along the way, Zeb Hogan was a key contributor to the students’ learning. As students’ questions arose, they were able to come to him directly for answers. Some of their questions follow:

• What type of data do you collect in your work?
• How do you take all that information and make sense of it?
• How do you calculate the degree of error you may have?
• Do you use stories or opinion to help you in your research?
• What mathematical data do you use?
• What environmental impacts are affecting big fish around the world? What can we do about it in our own communities?

We either chatted directly or we recorded ourselves asking Zeb Hogan questions, explaining why we wanted to know. Often, he recorded his answers in the field and sent them back in a video.

Ask Questions and Wonder

During this process, the students themselves came up with a question they wanted to answer by the end of the school year: What big fish could live in our local wetland? We decided that we would determine if it was a healthy habitat for fish to be found in.

Collect Data and Proof

To collect data, we determined that we would have to look at indicator species to determine wetland health. This included birds, plants, frogs and macroinvertebrates.

Testing the Water Quality

Thanks to the support of Inside Education (www.insideeducation.ca/), we looked at the temperature, oxygen levels and pH of our local wetland. We also talked with Zeb Hogan about how DNA sampling is helping biologists look at water species in the field.

Identified and Recorded Plant Species in the Area of the Wetlands

We discovered that many invasive species of plants exist in our local wetlands. We went back to see the changes the seasons had on the plants.
Identified and Recorded Bird Species

We found there were coots, Canadian geese, mallards and red-winged blackbirds. We added this information to our mapping data of the area.

Identified Invertebrates in the Wetland

We tested for benthic macroinvertebrates (small organisms) to help determine the quality of water in our wetland. These small species act as barometers of water quality. Some can tolerate pollution while others disappear as pollution increases. The students loved using the special equipment, such as magnifying glasses, to examine the creatures more closely.

The students recognized that some aquatic animals use oxygen from air and others from water and identified examples and adaptations of each. We successfully identified invertebrates in the moderately clean water level in our wetlands.

Visualizing Our Information

We used ESRI ARC GIS to visualize and compare the data we had collected with other data from the city about our wetland. We also got frog data from a citizen scientist program that the Mllastakis Institute was undertaking in the city of Calgary, mapping out frog species (another indicator of healthy wetlands). We used the data we had collected in ESRI ARC GIS, we created a story map webpage that shared our journey and findings. We then presented our work and
learning at the EsriCanada GIS conference. In attendance were city of Calgary employees who collect data, as well as industry members learning more about how GIS is used. We stressed the importance of partnership with youth for authentic learning.

Reflect on the Process and See What Is Next

When I talked to my class about what they had learned, the students felt that they had come to the same conclusions that Zeb Hogan had. They felt that fresh water is of vital importance and should be protected. They also wanted to continue to learn and discover. As youth conservationists, they wanted to track local conditions by monitoring and collecting more information. They were curious about soil samples and collecting data on vegetation and invasive species. They also wanted to work toward being able to restore, enhance and protect the natural space they had come to know so well.

Thank you to Zeb Hogan, Elder Saa’kotoko, Danah Duke (Miistakis Institute), Lynn Moorman (Mount Royal University professor of geospatial education) and Mary Adelaide (National Geographic explorer exchange coordinator) for all of their wonderful support during this fantastic opportunity.

Notes

1. For more information about the explorer-exchange opportunity from National Geographic, first become certified through this amazing PD at www.nationalgeographic.org/education/professional-development/educator-certification. Opportunities to talk with explorers through Exploring by the Seat of Your Pants are available at www.exploringbytheseat.com/.


3. Miistakis Institute: www.rockies.ca/. See more about the frog study at https://storymaps.arcgis.com/stories/40c50453e48d398ad2479509b33e0.

4. ESRI ARC GIS for Educators can be found at https://k12.esri.ca/.

5. You can see our final story map here: https://cbe.maps.arcgis.com/apps/Cascade/index.html?appid=af3956b0a43d40e7a536b0cafb5f4332

Reference

Can Outdoor Education Lead the Way?

Court Rustemeyer

It is March 2020. The gear has been sorted and organized. The meals have been prepped and dehydrated, and are ready to be shared around campfires, in winter huts and under open skies. All of it has been safely and meticulously packed away in our backpacks. The students and leaders alike are filled with a variety of emotions as they are now ready to set off on their four-day snow cave adventure. Nervousness, anxiousness and curiosity are just a few of the many states one can experience leading up to a trip. Sometimes it can even be overwhelming, but when you remember all the work, training and time you have put into prepping for the event, excitement takes over and you cannot wait to embark.

The students took their gear home and prepared to meet at the school the next morning to leave on their adventure. That evening, however, everything changed, and the pandemic arrived, cancelling everything in its path. The next time we saw our students, they were coming into the school, small groups at a time, to clean out their personal items from lockers and take home all their supplies. Sadly, they had to return all their gear, and the only question they had was, “We can go on our trip later right?” Unfortunately, there have been no out-of-city, off-site experiences since March 2020.

A lot has happened and changed since that time. This new reality of physical distancing, masks and constant sanitization has settled into our worlds and almost seems normal, like it has always been there as part of our daily routines. I am an outdoor education teacher and instructor living in Calgary, Alberta. I embody this role in every detail of my life. As such, opportunities in life, events that I take part in and
Patience and Understanding

There is so much uncertainty in our lives these days. We teachers often love a life of routine with some kind of structure. We have no idea how long this current situation will last. Sure, vaccines are being rolled out worldwide, but the question still remains, “When will everything return to normal?” The greatest skills required to lead in the outdoors is patience, ensuring that you take the time needed to approach every situation in the best possible way. Patience has proven to be an invaluable skill in our current circumstances. Currently, the government and health professionals are working tirelessly to ensure our health and well-being is maintained, but we need to do our part as well. Our part consists of physically distancing, wearing masks and layering on copious amounts of hand sanitizer every single day. This is not normal life for us, and this is not easy, but we need to be patient. We are absolutely going to be uncomfortable at times, but finding a new routine and daily habits might just make this unknown trail we are on feel like we are hiking on a familiar one, close to home.

When we teach students a new outdoor skill or explain the techniques required for equipment set-up, maintenance or activity, we as leaders need to show extreme patience on how we deliver. Students themselves must realize that this is not a race, and skill building is not something you can fast forward. To properly build the foundation of skill mastery or a solid base of confidence, you must have patience in the process of learning. Sometimes slowing down and taking things in stride before you sprint is the only way to succeed and build on your learning. Before I cook a gourmet meal in the backcountry, I should probably be able to make some hot drinks first. Before I even use my camp stove, is there some merit in learning the parts and maintenance of the stove in case something goes wrong out in the field?

A greater level of patience is required in the outdoors when we learn about the weather, our participants, ourselves and the uncontrollable. The weather will change all the time, but are we prepared for it? Can we wait out this bad weather, and do we know when to take cover? Are the students I am leading in need of a break? Maybe the students need...
to be encouraged or challenged to step up to a harder task? Perhaps patience is needed to realize that you and the students will not reach your goal or destination that day, and a new plan needs to be made.

Being patient is difficult when learning something new. How many new habits or routines have you adjusted during this time that have proven to be better for your mental health, well-being and overall life? Have many of us perhaps learned to slow down in life and have more family time, garnering a greater understanding of how important we are to one another? Are we eager to go back to our full-speed lifestyles?

Being alone in the wilderness, without our usual go-to comforts and being restricted by terrain or weather can certainly push many of us on many levels. Did we pack the right gear? Are we safe here? What’s tomorrow going to bring? Tons of articles are written on forest bathing, solo time and backcountry solitude. In many ways, these past 10 months have been like an unplanned backcountry solo experience for the world. Any student or adult who has taken part in solo time in the outdoors knows that patience is vital to achieving success. When students realize they are capable of more than they know is extremely rewarding. It might be one of the hardest things you have ever done in this past 10 months, but staying home and showing patience might be the best thing you can do during this time.

Sense of Belonging

The single most important lesson that outdoor education teaches us is the strength of community. When you are on a journey or adventure with a group, nothing can compare to the sense of community you feel at the end. To succeed in an outdoor endeavour you must show teamwork, trust, fairness, understanding and compassion for one other. Each challenge you face on the trail must be undertaken by all members of the group, with trust.

Students join classes, clubs and communities to be a part of something. We all want that. There is something extremely powerful about a group of people who are all on the same page working toward a common goal. What is even more powerful is that students in outdoor groups learn new skills and values while achieving togetherness. In our weekly or daily classes or meetings, students are constantly shown what a safe environment our spaces can be. The levels in which we are able to show students and leaders a sense of belonging over common goals is outstanding. When students start buying into a program or believing in one another, it will be them that organizes, cleans and maintains all the gear. They will be investing not only in their own years of adventure but also in future students who follow in their steps. I call it the ecosystem effect when everyone from students, parents, school community, alumni and future students all work together in an endless cycle. As a junior high teacher, being able to share a sense of community with 12- to 15-year-olds is pretty special. It’s a chance to show youth they can be a part of a lifetime of change. When former students and alumni are volunteering to help lead other students or show them skills they learned, that to me is what teaching is all about.

Skills learned in a group setting will have a powerful result on your adventure success. Can one person set up a camp as fast as a group of four or five? During meal prep, eating and dishes, is there a better time for you to connect with your group members to see how they feel, laugh over stories from the day, bond and...
build relations? Problem solving about gear, weather or challenges together, learning about group decision making, having a voice and listening at the same time are just a few of the important life skills learned just by being part of a tent group. If any of you have ever stayed in a hostel or campground with students, you definitely understand the laughter that radiates from them during the evenings while they are supposed to be sleeping. Those jokes are later shared around the campfire with stories of the day, the land and what is to come. Groups come together in so many ways with that sense of belonging. The appreciation for one another builds by the minute.

In my lifetime, there has never been an event like the pandemic that requires all of us to work together. As such, you should never be afraid to look to loved ones or ask for help. It will take a community to get through this together. Just because we do not get to go adventure together or hold hands in team-building challenges does not mean our community cannot exist. If anything, this pandemic has shown that in a time of trouble, problems or uncertainty, we should look to others for help to work together on the solution. As teachers, our schools and classrooms become those communities. Students need that sense of belonging, just as much as adults do. The outdoor classrooms show us this because we depend so heavily on one another to have success.

Care and Compassion for Others

No matter what path you walk on or where you are in the world, it is very important to approach all your daily activities and choices with compassion and care. There have been many outdoor adventures in the past that challenge students and push them out of their comfort zones. As leaders, sometimes we forget to put ourselves in their shoes and make decisions based on our participants and students. Putting the group first and having everyone take care of and watch over each other is always far more valuable and important than personal needs or desires. We leaders sometimes get so caught up in wanting to get students to the next amazing part of the trip that we often forget to appreciate students’ various needs. If we genuinely want students to have a great trip, then care and compassion for their unique needs are essential. This could include knowing that some of them get cold really easily, that some need more time and support than others to get packed up at base camp, and that some may want a few moments alone by the campfire to decompress and journal. We all come from different walks of life, and understanding how to support, appreciate and care for one another makes our journeys that much more rewarding. An outdoor group is a family that always cares for one another.

When we are part of an outdoor group, it is important to understand and know each other. What skills do we have that complement each other? What skills do I add to the group? What skills do I need others to help me with? We all come from different walks of life, and showing students that groups, teams or clubs are made up of all kinds of students is important. We don’t want 30 students from the exact same mould. We want an incredible group bringing all kinds of talents, stories, strengths and weaknesses. When we start to understand our similarities and differences, we start to invest more time in them. How can I help them achieve our goals together? How can they help me? What can we do together to help the larger group? One difficult skill that is cemented into our students’ training is offering and accepting help. Offer help when you can, but accept help always. We want to continue on our adventure or journey safely and as a group, not as individuals.

Are there ways that we can help those around us and in our communities during these struggling times? Sometimes we can show our compassion by just being there for one another to listen, to vent, to share struggles or stories. Helping to understand one another by listening is sometimes the best thing to bring others together. The outdoor education world makes you spend more time listening, not just to nature, but to those around you and with you, on the adventure.

Each and every one of us has the ability to get through this unknown time in a safe and caring way. Individually and together as a community, we can conquer this with our strong sense of belonging, our knowledge and our ability to overcome obstacles like this on a daily basis. Just like those moments when our adventure hits a challenge, we all need to look inside ourselves, find patience, embrace our community and absolutely support and care for one another with compassion. See you on the trail real soon.
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Lesson Plans

GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL
LESSON PLANS

Submitted by Carissa Esau

Carissa is a recent graduate from the University of Lethbridge, where she studied biology, art and education. Carissa has experience teaching elementary and junior high science, math, art and outdoor education. Carissa is a certified National Lifeguard instructor and Lifesaving Society Trainer, as well as a certified field guide. Aside from a passion for teaching and introducing students to the outdoors, Carissa enjoys rock climbing and exploring the many mountain trails in Alberta.
GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL
TEAM BUILDING LESSON PLAN
GRADES: 7 - 9

**OBJECTIVES**

**GENERAL LEARNING OUTCOME**
STUDENTS WILL DEMONSTRATE UNDERSTANDING, RESPECT AND APPRECIATION FOR SELF, OTHERS AND THEIR VIEWS

**SPECIFIC LEARNING OUTCOME**
STUDENTS WILL RECOGNIZE THEMSELVES AS INDIVIDUALS AND AS MEMBERS OF A GROUP

**MATERIALS**

**TEACHING NOTES**
- PEN/PENCILS FOR STUDENTS
- PRINTED PICTURE SHEET: 1 PER STUDENT (SEE ATTACHED)
- PRINTED WORKSHEET 1 PER STUDENT (SEE ATTACHED)

**LESSON ACTIVITIES**

**INTRODUCTION**
Tell students their plane has crashed and landed on an island. They have only 5 minutes to choose 3 items from the plane before it is engulfed in flames.

Ask students: "What would be an essential item you think you would need on the island?"

Students will ask where the island is, what the climate is, how long they are there, etc. Provide vague answers to ensure the activity is as productive as possible.

**BODY**
Give each student a copy of the pictures of items available to choose from the crashed plane (see attached). Provide students with 3 - 5 minutes to decide on 3 things they will keep on the island. Encourage students to think about what is essential to survive on the island. Students will write their chosen items on the provided worksheet (see attached).

Put students into groups of 3. Students will condense the chosen 9 items (3 per student) into 3 items total.

Combine groups into groups of 6. Students will condense the chosen 6 items (3 per group) into 3 items total.

**WRAP-UP**
Ask groups to share what they chose and why.

Students will answer the following questions on the provided worksheet (see attached):
- Why did you choose your items?
- What was challenging about working with other people?
- What did you enjoy about working with other people?
- Were you a positive group member? Why or why not?
- How could you improve your ability to work in a team?
GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL

STEP 1:

I CHOOSE:
1. 
2. 
3. 

STEP 2:

MY GROUP CHOOSES:
1. 
2. 
3. 

STEP 3:

MY GROUP CHOOSES:
1. 
2. 
3. 

WHAT WAS CHALLENGING ABOUT WORKING WITH OTHER PEOPLE?

WHAT DID YOU ENJOY ABOUT WORKING WITH OTHER PEOPLE?

WERE YOU A POSITIVE GROUP MEMBER? WHY OR WHY NOT?

WHY DID YOU CHOOSE YOUR ITEMS?

HOW CAN YOU IMPROVE YOUR ABILITY TO WORK AS A TEAM?
GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL

TEAM BUILDING LESSON PLAN

GRADES: 7 - 9

OBJECTIVES

GENERAL LEARNING OUTCOME
STUDENTS WILL DEMONSTRATE UNDERSTANDING, RESPECT AND APPRECIATION FOR SELF, OTHERS AND THEIR VIEWS

SPECIFIC LEARNING OUTCOME
STUDENTS WILL RECOGNIZE THEMSELVES AS INDIVIDUALS AND AS MEMBERS OF A GROUP

MATERIALS

• 4-5 LARGE TARPS OF DIFFERENT SIZES
• PRINTED WORKSHEET 1 PER STUDENT (SEE ATTACHED)

INTRODUCTION

Ask students to define a team (see attached worksheet)

Discuss as a class the concept of a team. Include the following point:
• a team is a group of people working together with a common goal

Ask students what characteristics make a good team (see attached worksheet). Include the following points:
• communication
• listening to all participants
• deciding on a plan

BODY

While outside, ask students to line up according to birthdate without talking. Move outside to a large open outdoor space (i.e. courtyard or field). Assign students into groups of 7.

Ask each group to send a spokesperson to the teacher. Give each spokesperson a tarp and the instructions to lay the tarp flat with all team members waiting quietly on the tarp.

Groups will flip over their tarp without any team member touching the ground. Repeat multiple times with the following variations:
• no talking
• 1 minute planning, no talking
• switching team members
• switching tarps

WRAP-UP

Students will answer the following questions on a provided worksheet (see attached):
• What was challenging about working in a team?
• What did you enjoy about working in a team?
• Were you a positive group member? Why or why not?
• How could you improve your ability to work in a team?
• How would you change this activity if you were the teacher?

Initiate a class discussion using the above questions.
WHAT WAS CHALLENGING ABOUT WORKING IN A TEAM?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

WHAT DID YOU ENJOY ABOUT WORKING IN A TEAM?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

WERE YOU A POSITIVE GROUP MEMBER? WHY OR WHY NOT?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

HOW CAN YOU IMPROVE YOUR ABILITY TO WORK AS A TEAM?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

HOW WOULD YOU CHANGE THIS ACTIVITY IF YOU WERE THE TEACHER?

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL
ANIMAL GAME LESSON PLAN

TIME

70-80 MINUTES

MATERIALS

• Laminated character cards on coloured paper (corner hole punched)
• Natural area with hiding cover and trees (schoolyard can work)
• rubber bands

LESSON ACTIVITIES

INTRODUCTION

Laminate character cards on coloured paper (see Table 1). Punch the corner of each card and add a rubber band.

Tell students that you are going outdoors to play the Animal Game. A flurry of enthusiasm may ensue!

Outdoors, walk students around the game boundaries, pointing out any hazards in the area.

Introduce the characters of the game. Refer to Table 1. Describe the goals of each organism (character), who they chase and who they are chased by. Show each of the four cards types to the group. Emphasize that they must collect as many cards as possible to survive.

Hand out character cards (see Table 2). As in most ecosystems, there are far more producers than herbivores, far more herbivores than carnivores, etc.

BODY

In this game, each organism type will try to tag their 'food' while escaping their predator.
• Carnivores tag herbivores, avoid decomposers
• herbivores tag producers, avoid decomposers and carnivores
• decomposers tag producers
• carnivores & herbivores

(see Table 1)

When a student is tagged, they will give their character card to their tagger.

The teacher will play the role of the sun. Rather than having a steadily growing pile of 'dead' (or tagged) students, you can give students a second life by issuing them another card. You may even experiment with the ecosystem by increasing the number of carnivores and decomposers!

Tell students approximately how long the game will last (try 10-20 minutes, depending on the age group). Tell students to listen for your signal that will end the game, and begin!

Give the producers a 10 second head start, followed by herbivores, etc.

WRAP-UP

Ask students to count the cards that they have. You may wish to establish a cutoff point (i.e. any surviving herbivores with less than 5 producer cards are deemed to have died of starvation).

This activity is very rich in that many ecological concepts can be explored with students!

Sample questions to promote discussion:
• What did you feel when you played the game? Is this how a wild animal might feel?
• What strategies did you use to avoid being caught? Do plants or animals use these strategies?
• What strategies did you use to catch other students? Do plants or animals use these strategies?
Lesson Plans

GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL

TABLE 1

<table>
<thead>
<tr>
<th>CHARACTER TYPE</th>
<th>GOAL:</th>
<th>CHASES:</th>
<th>CHASED BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCER (on green paper)</td>
<td>SURVIVE</td>
<td>NO ONE</td>
<td>HERBIVORES AND DECOMPOSERS</td>
</tr>
<tr>
<td>HERBIVORE (on brown paper)</td>
<td>TAG PRODUCERS, AVOID CARNIVORES AND DECOMPOSERS</td>
<td>PRODUCERS</td>
<td>CARNIVORES AND DECOMPOSERS</td>
</tr>
<tr>
<td>CARNIVORE (on red paper)</td>
<td>TAG HERBIVORES, AVOID DECOMPOSERS</td>
<td>HERBIVORES</td>
<td>DECOMPOSERS</td>
</tr>
<tr>
<td>DECOMPOSERS</td>
<td>TAG ALL OTHER CHARACTERS</td>
<td>ALL</td>
<td>NOONE</td>
</tr>
</tbody>
</table>

*CARDS ARE EITHER GIVEN AT THE BEGINNING OF THE GAME, OR DURING THE GAME AFTER THEIR CARD HAS BEEN TAKEN BY ANOTHER CHARACTER.*

TABLE 2

<table>
<thead>
<tr>
<th>CHARACTER TYPE</th>
<th>% OF TOTAL CARDS</th>
<th>20 PEOPLE</th>
<th>25 PEOPLE</th>
<th>30 PEOPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCER (on green paper)</td>
<td>70%</td>
<td>12 FOR START 11 GIVEN DURING GAME TOTAL: 23</td>
<td>12 FOR START 11 GIVEN DURING GAME TOTAL: 23</td>
<td>12 FOR START 11 GIVEN DURING GAME TOTAL: 23</td>
</tr>
<tr>
<td>HERBIVORE (on brown paper)</td>
<td>20%</td>
<td>4 FOR START 3 GIVEN DURING GAME TOTAL: 7</td>
<td>4 FOR START 3 GIVEN DURING GAME TOTAL: 7</td>
<td>4 FOR START 3 GIVEN DURING GAME TOTAL: 7</td>
</tr>
<tr>
<td>CARNIVORE (on red paper)</td>
<td>5%</td>
<td>2 FOR START 1 GIVEN DURING GAME TOTAL: 3</td>
<td>2 FOR START 1 GIVEN DURING GAME TOTAL: 3</td>
<td>2 FOR START 1 GIVEN DURING GAME TOTAL: 3</td>
</tr>
<tr>
<td>DECOMPOSERS</td>
<td>5%</td>
<td>2 FOR START 0 GIVEN DURING GAME TOTAL: 2</td>
<td>2 FOR START 0 GIVEN DURING GAME TOTAL: 2</td>
<td>2 FOR START 0 GIVEN DURING GAME TOTAL: 2</td>
</tr>
</tbody>
</table>
Lesson Plans...
The Global, Environmental & Outdoor Education Council of the ATA honours those people who have contributed to global, environmental and outdoor education. As a member of the council, you have the opportunity to nominate a deserving person for recognition. The nomination form can be found on our website (www.geoec.org/awards.html) and on the next page.

We would like to recognize and celebrate the 2020 GEOEC award recipients.

Awards

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 can include

- 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; and
- extension of teaching practice, research, legislation or funding in global, environmental and outdoor education.

Emily Parkin

Global, Environmental & Outdoor Education Council
- 2020 Award of Merit Winner -

It is with great pleasure we present the 2020 Award of Merit to Emily Parkin for her exemplary teaching, leadership and service in the field of Global, Environmental and Outdoor Education. Emily is a teacher at Morley Community School, where she inspires youth daily to be advocates for nature and the world they live in. Emily has also been a huge contributor and collaborating partner with several school programs in the Calgary Board of Education, helping provide opportunities to get outside for not only her students, but other schools.

Emily has helped lead the way for her school community to develop and start a school biking program with Two-Wheel View. Once again providing opportunities for students to explore the world in a different manner.

Emily currently lives in Canmore and enjoys spending a majority of her free time mountain biking, hiking, and cross-country skiing.

The Alberta Teachers’ Association
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. This professional development being offered can include but is not limited to:

- event hosts,
- materials and resources,
- sponsors and
- affiliate organizations and departments that have been of significant benefit to the council.

Colin Harris

Global, Environmental & Outdoor Education Council
- 2020 Appreciation of Service Award Winner -

It is with great pleasure we present the 2020 Appreciation of Service Award to Colin Harris for his ongoing support of GEOEC initiatives, especially in the field of Outdoor Education. Colin has been a huge contributor and collaborating partner for many GEOEC PD Events, including the Solstice Series, and other provincial wide workshops.

Colin is the Founder and Executive Director of Take Me Outside

Colin lives in Banff, Alberta, where he enjoys trail running, writing and continuing to find ways to engage Canadian Students in exploring this country’s incredible backyard.
Meet the GEOEC Executive Directors

The provincial board of directors is made up of elected members from the Global, Environmental & Outdoor Education Council (GEOEC). These individuals are elected during the annual general meeting. The board meets regularly in person and by conference calls to help direct the path of GEOEC, supporting members provincewide.

President Court Rustemeyer

Court has been a full-time outdoor education teacher at Vincent Massey Junior High School in Calgary, Alberta, for the past 13 years. He is also on the board of directors for the Outdoor Council of Canada (OCC) where he serves as the director of the prairies. Court is also a field leader instructor for the OCC. Court’s passion in student-led and experiential learning allows Court to instill a greater understanding of Indigenous and land-based knowledge into his students and others. When not teaching, you will find Court in the mountains participating in any number of activities, unplugging and recharging in nature.

Secretary Don McLaughlin

Don is a Grade 5 teacher in Calgary and serves as the GEOEC secretary. Don is extremely passionate about not only taking students outdoors but helping guide young teachers on adventures too. Don has been an executive with GEOEC for over 10 years and has had many different roles over that time. Don is also GEOEC past president. When Don is not busy on other provincial or national councils, he can be found exploring mountain views on less-travelled trails throughout central and southern Alberta.

Treasurer and Public Relations Director Beth Townsend

Originally from Ontario, Beth has been teaching in central Alberta for the past seven years. She has had an assortment of assignments. She says something she is always happy and willing to do is add some form of environmental or outdoor education spin to lessons. Since moving here, Beth has enjoyed exploring the mountains through hiking and camping. She also enjoys fishing and snowshoeing. You will find her playing slow-pitch and basketball.
CASL Liaison and Social Media Tyler Dixon

Tyler is originally from Saskatchewan but has been teaching with the Calgary Board of Education since 2006. He has been fortunate to teach in a variety of unique schools and programs. When not at work, Tyler enjoys such outdoor activities as hiking, camping, biking, SUPing, snowboarding, team sports, travelling, photography, spending time with good friends, and being at home with his wife, his boys and their German shepherd (named Rome).

Professional Development Director Abi Henneberry

Education is Abi’s vibrant second career, her first having been professional dance. That’s what prepared Abi to gracefully roll out of a kayak, lightly trip over roots on hiking trails, choreograph the fall off a mountain bike and stretch in contorted shapes while skiing! Abi teaches full-day kindergarten at Lois E Hole Elementary School in St Albert, Alberta, where she gets outside with the students for at least a kilometre hike every morning before they start their indoor day! She loves having the opportunity to work with young children and inspire awareness of the values that GEOEC represents. Her main outdoor pursuit involves horses. Abi takes dressage lessons regularly, loves spending hours trail riding, and spends time volunteering with Little Bits Therapeutic Riding Association in Edmonton. Abi hopes one day to combine her education background, equine interests and love of the outdoors in the “next career”!

Publications and Journal Editor Alison Katzko

Alison teaches Grade 5 in Calgary. She loves the arts, exploring and travelling. Her students have presented their work at Canadian ARC GIS conferences, won top standing at the Calgary Science Fair, and connected with explorers and scientists around the world. She has worked for National Geographic as a community lead. She has also worked on public arts projects to collect stories of how people are connected to the land for a community mural and as an advisor for the Calgary City Public Arts Selection Committee. She has travelled extensively!

Outdoor Education Liaison Jeff Siddle

Jeff was born and raised in Edmonton, Alberta, before heading south to be close to the Rockies. Working in special settings with youth at risk, addictions and corrections for over 10 years, Jeff is teaching with the Calgary Board of Education (CBE), specializing in wilderness therapy. Jeff spent a majority of his teaching career at BASE Camp in the Ghost Valley with Enviros. Jeff teaches Grades 5 and 6 at a Calgary elementary school. When Jeff is not helping youth in the wilderness, he loves to spend his free time mountain biking, skiing, surfing, paddle boarding and, especially, hiking! Jeff is a certified commercial guide and has been leading canoe and kayaking trips for over 15 years, including expeditions to the Arctic.
Global Education Advisor
Em Parkin

Em grew up in Owen Sound, Ontario, playing hockey, ringette and basketball. Her education career started in England and has brought her to China, New York State and, currently, to Canmore, Alberta. In Em’s spare time, she enjoys mountain biking, hiking and cross-country skiing.

Environmental Education Liaison Adam Robb

After teaching in Jasper and Cochrane, Alberta, Adam now develops and coteaches an environmental studies high school program at the CBE’s Career and Technology Centre (CTC) in Calgary, Alberta. Adam’s students were recently recognized by the Kimberley Foundation for doing the most to take on climate and environmental issues out of any school program in Canada. They are also the runners-up of the 2019 Greenest School in Canada award, as awarded by the Canada Green Building Council. The environmental education program has been recognized by the Organisation for Economic Co-operation and Development for being a World Leading Program. Adam’s students plan, organize and run provincial-wide environmental programming such as the Canadian Rockies Youth Summit, The Alberta Sustainable Building Symposium and #growAlberta. When not working, you’ll find Adam enjoying family time in the mountains or on the farm.

ATA Staff Advisor Tim Jeffares

Tim has had experience teaching and leading in various K–12 settings in Alberta and in China. After a short stint with Alberta Education as the director of Investigations and Governance, Tim joined the Alberta Teachers’ Association. He enjoys fishing, hunting, running, mountain biking, commuting to work year-round on his bike[s], snowboarding, skateboarding, hockey and, more recently, disc golf. Tim is excited to support this council and its important work.

PEC Liaison Darren Moroz

Born and raised on 8,000 acres in northeastern Saskatchewan, Darren has grown up on the land and has come to love all outdoor events. He currently teaches K–5 physical education and is incorporating outdoor education into his classes. He says, “I am invigorated by the inclusion in the incredible committee of GEOEC! Let’s get outdoors!”
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 ________________________________
School or Employer ____________________________ Grade Level/Specialty _____________________________
   _ New Membership   __ Renewal of Membership
   _ $25 Regular Membership
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Make cheque payable to the Alberta Teachers’ Association and mail it with the application to the Association at 11010 142 Street NW, Edmonton AB T5N 2R1.
They are the Educators and part of the FACE OF EDUCATION, and we believe in them.

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Some schools obtain blanket consent under *FOIP*, the *Freedom of Information and Protection of Privacy Act*. However, the *Personal Information Protection Act (PIPA)* and *FOIP* are not interchangeable. They fulfill different legislative goals. *PIPA* is the private sector act that governs the Association’s collection, use and disclosure of personal information.

If you can use the image or information to identify a person in context (for example, a specific school or a specific event), then it is personal information and you need consent to collect, use or disclose (publish) it.

Minors cannot provide consent and must have a parent or guardian sign a consent form. Consent forms must be provided to the Document Production editorial staff at Barnett House together with the personal information to be published.

Refer all questions regarding the ATA’s collection, use and disclosure of personal information to the ATA privacy officer.

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

780-447-9429 (direct)

780-699-9311 (cell, available any time)

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**Consent for Collection, Use and Disclosure of Personal Information**

Name: ___________________________________________________________ (Please print)

☐ I am giving consent for myself.

☐ I am giving consent for my child/children or ward(s), identified below:

Name(s): ___________________________________________________________ (Please print)

By signing below, I am consenting to The Alberta Teachers’ Association collecting, using and disclosing personal information identifying me or my child/children or ward(s) in print and/or online publications and on websites available to the public, including social media. By way of example, personal information may include, but is not limited to, name, photographs, audio/video recordings, artwork, writings or quotations.

I understand that copies of digital publications may come to be housed on servers outside Canada.

I understand that I may vary or withdraw this consent at any time. I understand that the Association’s privacy officer is available to answer any questions I may have regarding the collection, use and disclosure of these records. The privacy officer can be reached at 780-447-9429 or 1-800-232-7208.

Signed: __________________________________________

Print name: __________________________________________ Today’s date: ________________

For more information on the ATA’s privacy policy, visit [www.teachers.ab.ca](http://www.teachers.ab.ca).
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