

Connections

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Promoting a Sense of Place for Children in Natural Areas

The journal of the Global,
Environmental & Outdoor
Education Council



To promote involvement in
quality environmental and
outdoor education

About GEOEC

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

If, at some time in the future, I'm going to give power to someone to make decisions regarding the fate of the world, I want that person not only to have a knowledge of what nature (the outdoors) is, I want them to have an appreciation for it. I want that person to have seen the stars at night, not just a sodium glare reflected from city smog. I want that person to have walked beside a stream from which you can drink unfiltered water. I want that person to have listened to a forest in the wind and felt a paddle in their hand as he or she 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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President's Message

What a busy and great year for the Global, Environmental & Outdoor Education Council (GEOEC). Before we even talk about all the success we have had this year, we must acknowledge the fact that none of this would have been possible without all you amazing teachers coming out and participating in so many workshops and events! Thank you for your time and support. We look forward to another great year ahead.

Last year, our annual Solstice Series was another huge success. Part I of the series was hosted at Bow Habitat in Calgary last fall, where educators got together to help with networking, go over off-site changes and have some wilderness first aid demonstrations and updates from Rocky Mountain Adventure Medicine. Part II of the series had over 50 teachers, students and outdoor enthusiasts take part in an interactive keynote presentation by Doug Gleddie. Other presenters included Colin Harris, from Take Me Outside, and guests from Weaselhead Flats. On day two of the PD event, some members took part in a Project Wild certification course, Outdoor Council of Canada training course and an interactive networking outdoor education classroom. It was so great to see such a strong community of like-minded outdoor enthusiasts come together.

This past year also saw GEOEC team up with the Social Studies Council and First Nations, Métis and Inuit Education Council for their annual conference titled "Grounded in Truth, Soaring with Knowledge." There were some excellent workshops, speakers and presentations that left all members excited to collaborate in the future and offer opportunities for many levels of professional learning and adventures for students!

In the late spring, GEOEC was fortunate enough to organize a nature walk with Ryan Heavy Head, a Blackfoot education leader and rattlesnake whisperer. The event took place at the Helen Schuler Nature Centre, in Lethbridge, and participants left the event very thankful to be a part of such a quality PD event. Thank you again Ryan Heavy Head for your time and knowledge.

These are just some of the highlighted events that took place this year; not included are the many conventions, conferences and venues that GEOEC members participated in across the province. Thank you to everyone who helped share the passion of GEOEC with others!

This year we look to keep up the strong professional development efforts. The Beginning Teachers' Conferences always signifies a great time of year! Hopefully many of you new to the field came to visit the GEOEC booth or sessions being offered. We can't wait to see you at more events in the years to come.

Solstice Series is already at it with Part I taking place at the beautiful facility at the Rocky Mountain Outdoor Learning Centre near Canmore.

A number of GEOEC presentations and sessions will be offered at many conferences provincewide this year. If there is a need for Global, Environmental & Outdoor Education sessions at your conventions, conferences or PD events, please contact us so we can set something up for the future.

Please keep up to date by following us on Twitter, Facebook and Instagram. Do not hesitate to send us a note with any questions you may have. Thank you to all teachers for the amazing work you are doing with your students. We wish you the best of luck on all your adventures!

Court Rustemeyer

Message from the Editor

Welcome to another issue jam-packed with valuable material. Within, you will find curriculum connections and practical resources. GEOEC continues to connect with innovative organizations that work hard to bring global, environmental and outdoor education to youth. In this issue, you will find out how Full Circle Adventures, Calgary Parks and the Alberta Emerald Foundation are bringing quality programs to Alberta teachers and youth.

This issue also shares teachers' ideas and experiences on how they get students outside and creating positive impacts. Geo-Hunt explains how to create an engaging experience for students to use their electronic devices outside. We also hear how an innovative school is being the greenest school in Canada through environmental projects. You can also enjoy an article about how raising chickens and a little risky building creates adaptable and engaged youth.

Are you looking for the latest in lesson plans or just curious about links to affiliated organizations? The GEOEC website is there for you (www.geoec.org). Our award-winning website has updated information about the council and its programs as well as links to other global, environmental and outdoor education sites. By becoming a member, you can have access to past journals as well as lesson plans in our Resource section of our website.

Within our featured articles and stories of practical organizations for teachers to connect with, you will find ways to engage students and spend time in the natural environment. These inspirational features provide a rationale for why we do what we do. With that said, I hope you find this issue insightful and share the nuggets with friends.

I look forward to meeting you at our next conference.

Alison Katzko

Submissions Information

Connections seeks articles that engage readers in connecting with global, environmental and outdoor education. If you are an organization that would like to share resources, topics and ideas with educators, we would love to hear from you. We would especially love to hear from educators who can share lesson ideas and stories from adventures with their students. We are particularly interested in articles that use classroom curriculum and school-based projects to illustrate these connections and in which student participation is a central focus.

Articles can be submitted year-round.

E-mailing submissions to the editor is ideal, but you may also submit articles, artwork and photographs by regular mail (on thumb drive or hard copy). Please include a short biography and story (and 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 Alison Katzko, Edgemont Elementary, 55 Edgevalley Circle NW, Calgary, AB T3A 4X1 or e-mail akatzko@gmail.com.

GEOEC Business and News

A New School Year for New Adventures

Tyler Dixon

The morning air was decidedly fall even though the calendar indicated we were still a few days away from autumn's official arrival. A group of passionate educators and enthusiasts converged on the Canadian Rockies Outdoor Learning Centre nestled in Bow Valley Provincial Park. The new school year was already under way, but 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 much to pass up, so we filed in and took a seat.

Our newly elected president (and planner of this event), Court Rustemeyer, warmly greeted everyone and thanked us for coming. It was nice to see many familiar faces, but equally exciting to see all the new ones in the crowd. Even though this was a Calgary Board of Education (CBE) event, we welcomed teachers from school boards across the province.

One of the coordinators of the Outdoor Learning Centre (OLC), Colleen Lee, was our first official speaker. She delighted the crowd by sharing all the different programs offered through the OLC, all of which are open to school boards from all over. I don't think I was the only one in the crowd jealous of her teaching assignment!

Following Colleen was Vicki Perkins, the environmental education coordinator for Alberta Parks. Her passion for getting kids outside and learning about

the natural world was infectious. She highlighted all the different programs offered through Alberta Parks and talked about building capacity in teachers so they can eventually lead their own enviro-based trips.

Jeff MacPherson, from Kananaskis Public Safety, gave an in-depth and insightful presentation about the importance of trip planning while recreating outdoors. He shared stories from his job, which were both humorous and eye-opening, and made everyone realize that the paperwork required for wilderness trips is completely necessary.

Colin Harris, founder and executive director of Take Me Outside, talked about this incredible nonprofit that's dedicated to getting kids across Canada outside. He shared tidbits from his personal journey and reinforced the importance of unplugging and disconnecting more often. He also highlighted the new learning challenge that has been proposed to all Canadian teachers, inviting them to get their students outside once per week for the entire year.

Anne Daniel, a CBE system specialist for health and physical education, talked about loose parts play. "Kids have the right to play" was the quote that really jumped out at me, and I began wondering when was the last time I just played for the joy of it? Loose Parts is an amazing initiative for students and is being implemented in Calgary after a successful trial run in Edmonton. Be sure to check it out!

Jennifer Hanna, CBE system assistant principal for off-site activities, spoke about policies and procedures for seamless trip planning within the CBE. She offered incredibly valuable information for all teachers looking at taking kids off-site. Jennifer is the one who makes all of our out-trips a reality!

As you can see the morning was filled with some incredible presentations and presenters, but being outdoorsy folk, we can't sit indoors for too long. After a brief lunch break we moved outside where we welcomed Jay Honeyman, a human wildlife conflict biologist with Alberta Environment and Parks. He talked about the importance of wildlife safety and even

brought along the bear cart for us to try. It's a fantastic way to incorporate wildlife safety and practise bear spray technique with your students. Anne Daniel also demonstrated different elements of loose parts play outside, because what's the point of just hearing about play? You should be able to get your hands dirty and fully immerse yourself in it!

As the day ended and we said our goodbyes, it wasn't with sadness or grief, but anticipation and excitement for things to come. We thank you for your dedication and your passions, your students are lucky to have you.

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

Edmonton Solstice Series

Tyler Dixon

Our first Solstice Series event in Edmonton was a big success. Due to the majority of our executive board residing in southern Alberta, the Edmonton region has been overlooked for too long, but that all changed on Saturday, December 7, 2019. Although the day was blustery and cold, that didn't stop over 30 outdoor educators and enthusiasts from converging on the Alfred H Savage Centre for a day of professional learning and networking. Participants were joined by several service providers from various areas of outdoor education, including Raven Rescue, the Beaverhill Bird Observatory (BBO), Wild North, Edmonton River Valley Programs and Nature Alive Adventures.

Up first was Travis Finlayson from Raven Rescue. Raven has solidified themselves as an industry leader in rescue, safety and remote medicine. Travis highlighted the programs and services they offer, as well as their specific programming aimed at teachers and students. We were really happy to have Raven Rescue involved at this event.



Sara Meijerink from the Beaverhill Bird Observatory was our second presenter. Her high energy and love of wildlife was infectious, although her copresenter, Ricky, a saw-whet owl, stole the show! The BBO is the second-oldest migration monitoring station in Canada, and Sara was able to share in-depth information about the research being done at the observatory. She also gave an excellent overview of the different environmental education programs they offer, such as BirdSmart, in-class presentations and site visits.

Our third presenter was Mallorie from River Valley Programs. This program is run by the city of Edmonton and offers various outdoor pursuits to school groups. The variety of activities they have available for your classroom is staggering, and it's an excellent way to provide an experience that's both safe and engaging for students.

Wild North is a wildlife rescue and rehabilitation society dedicated to reintroducing injured animals to their natural habitat after being treated. Carly Stenhouse gave an engaging presentation about the work they do, the animals they have rescued and the educational programs they provide. These include the Junior Wildlife Ambassador Program, Wild Kids Camps and various educational outreach programs.

Last, but certainly not least, were Dale and Colleen Kiselyk from Nature Alive Adventures. This husband and wife dynamic duo led us through hands-on experiential learning activities in the arts of bushcraft and survival skills. We erected a fire tarp, brewed tea from native plants, constructed rope from cattails and learned about the connection between Leave No Trace and bushcraft. Their session was the perfect way to wrap up a wonderful day and left all of us wanting to know more. I hope we can welcome them back to future events.

With the connections we made and the momentum we're building, this won't be our last Solstice event in Edmonton. The ideas and possibilities are already being discussed to make our next offering bigger and better. We'll be seeing you all very soon!



Calgary Solstice Series

Tyler Dixon

Building on the success of last year's three-part Solstice Series events, GEOEC hosted the second edition on January 25–26, 2019, in Calgary.

The Friday night speaker series featured presentations from the outdoor leadership students at Vincent Massey, Rebecca Schwab and Lisa Dahlseide from the Weaselhead Preservation Society, and Colin Harris from Take Me Outside.

The keynote speaker was Doug Gleddie, a professor from the University of Alberta, whose presentation focused on the importance of risky play in childhood development.

Saturday featured professional development sessions including a Project WILD workshop, a session about

bridging the outdoors with technology and social media, and, finally, one about exploring the forest ethos from idea to application.

The weekend was a huge success, and we carry this momentum forward by continuing to host similar functions in the years to come.

In closing, we would like to thank our sponsors who generously donated some incredible door prizes: FGL Sports, Alberta Parks, Crowfoot Media and Rocky Mountain Adventure Medicine. Be sure to watch our social channels for information about the Solstice Series: Part III.

Articles and Features

Developing a Sense of Place in Nature

Julie Walker



Full Circle Adventures has been guiding outdoor education experiences for Grades 5 and 7 students in the rural schools for six years. We use multi-use hiking trails that have examples of raw, wild landscapes and modern human impacts that have changed what we now consider nature. Recently, we have offered these same programs in the city of Calgary in our stunning wildland parks.

Outdoor experiences are the most memorable for students when they realize that nature is more than

what they thought it was. The Blackfoot, Nakoda Sioux and Plains Cree all learned that nature offered plants, trees and grasses to the people for the creation of tools, shelter, rope, cooking utensils, medicine, fishnets, snowshoes, food and so on. This knowledge came through their relationships with nature and the experiences that were passed down through generations.

The trick to building a relationship with nature today is to provide students with experiences that allow them

to have a taste of what a relationship with nature might look and feel like. A balance of unstructured exploration and a few questions combined with fun, motivating activities is required to accomplish the fulfillment of an overall goal for the outing.

To accommodate this, we choose locations carefully to enable students to explore in a safe way for them and for the habitat. Inquiry-based learning, survival activities and the engaging their imagination are the main strategies we employ to activate their understanding of and participation in the program.

Our goal is for students to come away with a sense of awe, or at least awareness, that nature is so much more than the services it provides such as trees for oxygen and lumber, and homes for wildlife. The secondary goal is to build a memory of their day in nature that is part of a memory bank account. This account is where their relationship with and experiences of nature are kept. We like to call it the sense of place account.

Learning about the history of humans and the land in southern Alberta and building a relationship with the landscape allows students to build a relationship with a place. This sense of place can provide a feeling of belonging to a place in Alberta where students have knowledge and memories of an eco-region in nature that is unique to where they live and belonging to a lineage of people who also have experiences and stories of this landscape.

Let's use Mount Yamnuska for an example. This geologically stunning mountain has two faces on its summit. One we know is the face of Chief Hector Crawler, a Chief of the Nakoda Sioux and an important leader in the Nakoda Sioux history. These faces were not carved by humans; they are the result of erosion. The same mountain has on its front face many climbing

routes upon it. Climbing is an awe-inspiring culture of European origin, and a long history of the climbing culture is associated with this mountain.

I have two friends who climbed Mount Yamnuska and fell more than 500 feet. They both survived the fall with life-altering injuries. This story is one of awareness and respect. I have hiked to the shoulder of Yamnuska over 50 times. Each time feels like my first time, because for me this is a special mountain.

I hope these stories of the land help to explain that being at a place once does not mean you know that place anymore than meeting a person once means you know that person. We encourage students to return to these places with their families to share what they now know about these ancient places. We try to link this sense of place to students whose families come from other countries, by asking students to share their parents' memory or story of a place, a smell or other nature experience that is part of their sense of belonging.

I hope that these short, one-day outings that we have with these students are enough to leave a trace, a foundation, for this sense of belonging to take seed. It is the continuous relationship students have with a place that can really build that foundation. I applaud this movement, for the grounding of people into a landscape is an important building block for the development of confidence, security and belonging.

GEOEC has built a bank of techniques, activities and organizations that provide these opportunities, then we have some great tools to share in building a solid footing for students to stand on.

Julie Walker is the owner and program director of Full Circle Adventures. E-mail Julie at info@full-circle-adventures.com.

Caring for Our Watersheds

Cody Field

Citizens can take countless actions to improve the health of our watersheds. The Caring for Our Watersheds program asks Grades 7–12 students to address the question, What can you do to improve your watershed? Through a unique, hands-on approach to project-based learning, youth from around the world are making a difference in their communities by proposing and implementing solutions to local environmental issues.

In this environmental contest, students must research their local watershed, identify an environmental concern and devise one realistic solution. Community judges select the top 10 entries to compete in a final, verbal competition where finalists have five minutes to pitch their solution to a new panel of community judges. All finalists and their schools receive a cash prize, with the first-place winner earning \$1,000. In addition to these rewards, Nutrien, the world's largest provider of crop inputs and services, provides \$10,000 in implementation funding to turn

students' realistic and innovative environmental projects into a reality.

Alberta Student Action Examples

Students from St James School in Calgary created a rain garden in their schoolyard by planting native, water-wise species that improve soil water retention. They also educated their classmates on the importance of water conservation to our watershed and how native species contribute to the health of local ecosystems. Students from the same class spearheaded a project to support solitary mason bee species. They installed bee hotels in their school's green space and planted native wildflowers and shrubs to attract bees and increase biodiversity. They then provided information to encourage other students to follow suit and take action to protect local wildlife and their habitats. The project has also improved the aesthetics and learning opportunities for students engaging in the outdoor classroom.



St James School outdoor classroom, rain gardens and bee hotels

After recognizing that the Clearwater River near Fort McMurray was in desperate need of help because of litter and pollution, a group of Westwood Community High School students took action. It had been years since the river had had an organized cleanup, and the students, called the Clearwater crew, took the initiative to organize a communitywide cleanup day along the riverbank. Partnering with the rural municipality of Wood Buffalo's beautification department, the Clearwater crew and their volunteers successfully picked the Clearwater River shores clean in June 2019.

These are just two of the dozens of student-led initiatives that have been implemented in Alberta, and hundreds of projects have been implemented across the 10 contests worldwide! If you are looking for a

creative and impactful way to teach Grades 7–12 students about local environmental issues, the Caring for Our Watersheds program can help. There are over \$17,000 in cash prizes to be won for participating students and their school or club, with additional funding available to make a tangible difference in their communities. Start working this program into your curriculum plan now! Free watershed presentations are available to introduce students to the Caring for Our Watersheds program and relevant watershed issues.

Visit caringforourwatersheds.com for more information and to register.

Contact Nathalie Stanley Olson, program coordinator, at 780-672-0276, e-mail nathalie@battleriverwatershed.ca.



EcoVision Creates the Greenest School in Canada

Beth Townsend

It was a snow day at school. Buses were cancelled, but teachers arrived when they could get to school safely. A fellow teacher, Steve Schultz, asked for help to harvest fish. Because I enjoy fishing as a hobby, I decided that on a snow day that sounded like an interesting afternoon. Steve was expecting an order of 100 baby tilapia fish to arrive and had arranged for students to help him, and some students from the EcoVision Club who could walk or safely drive to school in the afternoon came to help. Our first task was to catch the fish. After

some time and a few different techniques, Steve and the handful of students were able to fish the fish out of the tank. Then we made an assembly line to chop the fish heads off, gut the fish and package them—an activity they had never done before and will likely never forget. The fish were then cooked in the school cafeteria or sold to community members.

As I was new to École Lacombe Composite High School (ELCHS) (contracted to cover a maternity leave), this was my first introduction to what Steve and the EcoVision

Club at our school do, and I was, needless to say, impressed. Over the past couple years, I have continued to explore, follow and help, when possible, EcoVision at ELCHS. I would like to highlight some of the incredible projects that Steve and the club have created.

We have an almost net-zero tropical geodescent greenhouse with a constant internal temperature of 13 plus degrees Celsius. This is accomplished by such things as its shape, solar panels and evacuated tubes. Inside the greenhouse you'll find tomato plants, an avocado tree,



a couple of banana trees, succulents, herbs and so on. This is where the commercial aquaponics system is held that often holds more than 100 tilapia fish. In our student common area, you will find a one-of-a-kind portable aquaponics system. It starts with a fish tank that passes water that has been fertilized by young tilapia over a media bed down to a raft bed that grows plants (currently basil).

These are just a couple of examples of projects that are under way at ELCHS. Steve Schultz is not only dedicated to these initiatives but also inspires and encourages students in his agriculture class and EcoVision Club to help continue to run and keep up these projects.

EcoVision's mission statement: To grow student leaders through student-led projects. These projects

must include the following three pillars:

1. The environment—improve our air, water or land.
2. Education—supplement the learning of individuals.
3. Involve our community—increase the sharing of ideas, skills and expertise locally, provincially and globally.

Here are some other ELCHS EcoVision projects:

- Beekeeping
- Ten-plus solar panels on the school roof that produce 6.0 kilowatts, which can power six classrooms
- A two-acre garden that includes 175 fruit trees and more than 50 raised gardens
- Three compost bins
- Indoor gardens such as our urban cultivator and stand-up garden

The Next Big Project?

Roofs 4 Kids, which will be a building made from recycled sea cans that has an outdoor classroom and a living roof, is powered by solar panels and houses goats (and possibly other animals in the future)!

Congratulations ELCHS, EcoVision and Steve Schultz for being Canada's Greenest School in 2018. It is, without a doubt, well deserved, and your projects are inspiring!



Connections Through Fish Adventures

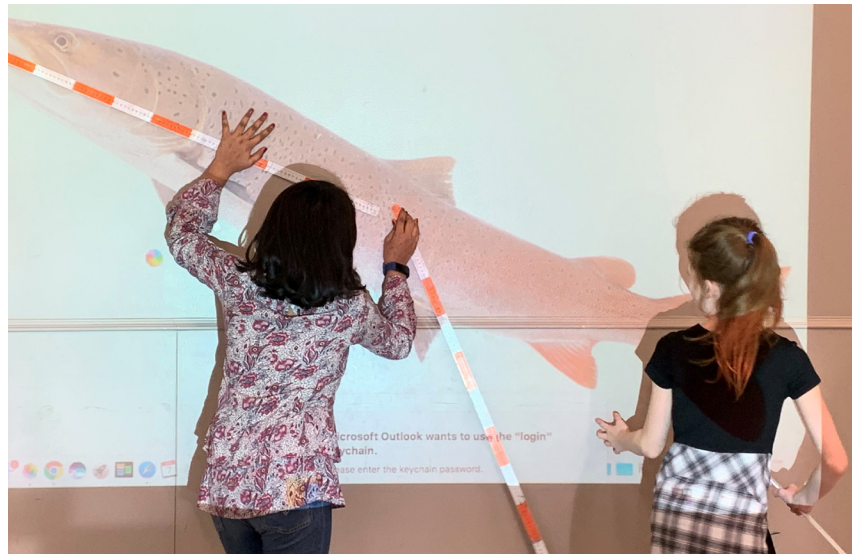
Alison Katzko

As I climbed the last few kilometers through the cypress forest toward the Dzong (a Bhutanese fortress and monastery), I could not help but think that this was all connected to my Grade 5 students—and to fish. Here I was on the other side of the world doing the same thing I ask of all my students; I was learning new things and discovering new people and possibilities.

I'm really not someone who has been particularly interested in fish. I had gone fishing a few times in my childhood, where I had the sneaking suspicion that the only nonedible fish in the river (a sunfish) was constantly rebiting my hook. That is as far as fish and I ever went.

So when the FinS (fish in schools) program at the Bow Habitat sent out an invitation to raise and then release trout, I had mixed feelings. I must admit that I was more invested in getting my students out to the mountains to release the fish than the actual raising of them, but it seemed an excellent opportunity to provide hands-on learning in the classroom, so soon the fish arrived.

That year we raised the baby trout from eggs to fingerlings and connected a whole year of inquiry into water conservation. Actually, the students did the raising! I was



more of a go-between, sending panicked e-mails to the lovely (and very patient!) education coordinators, when our fish tank's pH was off or a baby fish seemed sick. As one of the students summarized "being a fish mom can be stressful! You can lose them easily as they are so small and there are so many of them!" That year culminated with a design challenge where students built an interactive display that taught others about water issues. The students became experts on topics like the impacts of waterways in Canadian exploration, influences of invasive species and, of course, how to raise and release trout.

The next year, my class was selected to participate in an Explorer Exchange through National

Geographic. This opportunity connects educators with National Geographic explorers for a full year of collaboration. With a Grade 5 group consisting of mostly active boys, I was a bit nervous about how it would go. How well were they going to engage in virtual conversations? Fortunately, the class was matched with the perfect person—a television star who could engage and enthrall my class! Zeb Hogan (star of the television series *Monster Fish*) studies (you guessed it!) the largest freshwater fish around the world! We talked to Zeb throughout the year in virtual format. We learned how he does research, conducts the scientific process and shares his research. We also discovered how to ask quality

questions. Zeb Hogan not only had the students connected and engaged with conservation; he also had me starting to see the importance of those big fish species!

So this summer when an opportunity came up to volunteer as a teacher in Bhutan, I was really excited! Bhutan is best known for its philosophy of Gross National Happiness, but their conservation efforts are also amazing! Bhutan preserves for all time (written into their Constitution) 60 per cent of its land under forest cover! (See www.worldwildlife.org/projects/bhutan-committed-to-conservation.)

I was curious about their education and the values that youth received in their schools. They obviously appreciated fish, as Zeb Hogan shared that the endangered giant golden mahseer is thriving in Bhutan. (See www.nationalgeographic.com/animals/2019/07/golden-mahseer-conservation-bhutan/.)

I spent my summer in the capital of Bhutan (Thimphu), teaching at Jigme Losel, a school that is recognized as a green school. Green because it has an amazing garden stretching throughout the grounds, along with an effective recycling program and efforts to use less waste. While teaching the (Grades 4–6 aged) students, I asked them what they thought of fish—telling them of how my fish experiences had helped bring me to them. They shared stories of the eight auspicious symbols recognized in Bhutan that are good luck—and how one of them is a fish. They also pointed to a mountain across the valley and

shared that if I hiked to its top, I would find giant fish at the Dzong.

So that weekend I went. I climbed to the top of the hill overlooking Thimphu and came to the Dzong perched above the valley. The ancient building with its dark-orange coloured clay walls had a quiet feel that resonated with old stories. I wandered around the building, greeting local people who had also hiked up for the day. I did not see a pond or river anywhere. I finally came to rest on a rock overlooking the valley. Despite the lack of fish, I reflected on my adventures and discoveries and felt excited to share them back with my Bhutanese and Canadian students. I felt very lucky and connected to the world!

Fortune smiled on me, and I struck up a conversation with a local family. My quest for the elusive fish soon came out, and they laughed happily and pointed to a small building. “The fish is in there,” they explained, and it was! The resonant sound of monks chanting and the smell of incense met me at the door. As I entered and my eyes adjusted to the dim light, I saw—there in the corner in a glass case—a dried fish larger than me! A monk approached me and told me the story of the fish, the river and the history of Thimphu. It was a story that involved a deep appreciation for the environment.

Now I am back in Canada, and the students I am teaching are excited to write to the Bhutanese students I had told them about. They are sharing their stories of what they value and appreciate. While reflecting on mysteries found

on far-off hills and classrooms, I think about how I never thought I would think so fondly of fish!

Fish have taught me about my students. They have shown me how my students can care about the tiniest of baby trout, take up complex topics, research like an expert, and if you listen to them closely, they share ideas and questions that lead to amazing discoveries. Naturally, this year, many of the stories the students are writing to their friends in Bhutan include adventures with our classroom fish tank (donated through the Calgary Aquarium Society). I’m sure it is the beginning of some great learning for us all.

.....

*In the end we will
conserve only what
we love, we will love
only what we
understand, and we
will understand only
what we are taught.*

—Baba Dioun

For more information:

Bow Habitat Station Fish in Schools
<http://bowhabitat.alberta.ca/programs/fish-in-schools.aspx>

National Geographic Connect with an Explorer
www.nationalgeographic.org/education/explorer-connections/

Calgary Aquarium Society
www.calgaryaquariumsociety.com/

Bhutan Canada Foundation
<https://bhutancanada.org/programs/teach-in-bhutan/>

Geo Hunt

Hamilton Baudner

How many times have you heard someone complain about students being on their devices too much? Combine that with parents admitting that getting their child outside and away from their devices can be very trying at times. The commonality in these two scenarios is that the solution usually isn't found without some type of reward. I for one have had enough of these situations come through my door for everyone. The most common misconception about geographical navigation games or geocaching, as it is commonly known, is the sheer demands placed on the teacher and students by respective technology, energy needs, Wi-Fi or data concerns, personal privacy issues and, last but not least, student engagement. The question I always get is: How can a teacher really trust that students are independently using their phones to play the game? What one teacher did was take away those challenges altogether for younger students and integrate it slowly as students were ready. Here's how.

The idea of using geographical navigational hunting for treasure in an elementary school originates in treasure hunts. Historically it was a measure used to encourage children to familiarize themselves with maps, which were the primary tool for navigation at the time. In today's modern age, instead of plotting a map or drawing one, many people turn to their devices to get out and about. Pokémon Go is one of the most popular examples of using navigational systems to play a game outside with a personal smartphone. What has been lost on these apps are the demands placed on a teacher to align curriculum. This article is going to give you a taste of just how viable and frankly amazing geo hunting can be when used correctly, even and especially with younger ages. All a teacher needs are a few things from the dollar store and some great places to hide each waypoint. With students using a map or a set of key landmarks, any environment, even inside a classroom, may become a beta testing area for your class's first geo hunt.

Imagine, if you will, that it's a sunny day outside. The students are restless while preparing for your big math test. On top of that, many have been struggling with their recall of basic facts. So, you, the savvy teacher, spend a couple of hours one evening creating exactly what your students need. Strategically and carefully you create a set of questions and answers that have corresponding clues needed to get to the treasure. (Note: Once students have mastered playing the game, you can add into the map and waypoints curricular-based questions and challenges, thereby increasing the workload on the teams. This would be seen as students who are ready for the test make it to the final waypoint while others get stuck at specific points you have intentionally made more difficult.)

Once you have set up your game, you must then create a key on which you put the jumbled answers to give the last and final answer or clue. This is replicated for all the students. With this odd-looking key and their map (or) directions, students team up in various ways (recall, writing, mastery). Together these small teams eagerly approach this mysterious environment that during an average recess would just be the school grounds but has now become a thing of intrigue where treasures wait to be discovered by the team able to come up with enough clues and correct answers. The great thing about this is that your assessment is done through the different jobs you give your team members and their respective output. This, in a nutshell, is your first geo hunt.

Geo hunting is fun and academically challenging. Most important, at its core it teaches youth the importance of utilizing their devices as tools, not as distractions. While young students may take several attempts to succeed, your class will reach the point where they are ready to incorporate a compass, or even smartphones and NFC chips. The potential is endless and needs only your creativity and imagination to apply it successfully. The sky is literally the limit.

Alberta Schools' Green Dream Projects Become a Reality

Gregory Caswell

The Alberta Emerald Foundation (AEF) believes in inspiring the next generation of eco-heroes by supporting Alberta's young people (aged 25 and under) in their environmental efforts. With funds from founding program sponsors, and other sponsors and individual donors, the AEF provides micro-grants of up to \$500 to youth-led and youth-targeted environmental projects and initiatives. The AEF strives to allocate over 100 Youth Environmental Engagement Grants each year.

Here are some examples of amazing youth-led environmental projects that have benefited from the program.

Rotary Interact Club

J Percy Page High School, Edmonton

The long-running Rotary Interact Club at J Percy Page High School sees about 40 dedicated student members taking on multiple environmental projects each year. In 2018, the Rotary Interact Club joined with the school's Earth Club and grad committee to enhance the surrounding school grounds—an ambitious project that included spring litter cleanup in the Mill Woods Park area near the school and the development of several planter boxes on school grounds.

Meeting after school and through many lunch hours, club members created a comprehensive plan with input from school, community and district levels. Over several days in May, club members removed garbage and debris, added soil and nutrients and transplanted trees and flowers. Two retired tree nursery owners helped create professionally designed planter boxes for the deciduous shade trees, various hardy shrubs and

pollinator-friendly flowers. The aesthetically pleasing planters not only enhance school property, they also show pride in rejuvenating the biodiversity of the surrounding environment.

Funds from the Alberta Emerald Foundation's Youth Environmental Grant Program and the Ron Kruhlak Award helped purchase the nutrient-rich soil, drought-tolerant plants and trees for the program.

Club students looked forward to the positive reactions from graduates and their families as they passed the landscape features and environmentally friendly planter boxes now enhancing J Percy Page High School.

Leap Solar Greenhouse and Community Garden

École McTavish Junior High School, Fort McMurray

In Fort McMurray, year-round gardening just isn't a reality. That's what makes École McTavish School and its solar greenhouse and community garden project special. Thanks to the work of Grades 7–12 student members, teachers and volunteers, tender vegetables and flowers can be planted inside during any season, whatever the weather, in an in-class greenhouse fitted with four rooftop solar panels.

In spring, when weather allows, seedlings can be transplanted into one of four large outdoor box-shaped community gardens. As plants grow through summer, volunteer families take on the job of weeding and watering the lettuce, potatoes, zucchini, radishes, peas and beans, plus marigolds and gladiolas (which help keep bugs away from certain plants). Starting vegetables early in the season indoors allows students to host a mini farmers'

market before school breaks, with proceeds going back into the project and leftover produce donated to local food programs.

While the solar panels help offset power costs and utilize renewable energy to grow greenhouse plants, they're also the focus of an added lesson for science

students by being broadcast on the school's Wi-Fi—showing real-time electrical input and output throughout the year.

Do you have an environmental project that needs financial support? Apply for a youth environmental engagement grant at emerald.foundation.ca.

Kids Must Learn How to Fail and Adapt. Here's How We Did It.

Teresa Waddington

We have four chickens: Pecky, Buckbeak, Mayonnaise and Cornflake. My husband, Andrew, made their coop; it's a four-star mountain chalet A-frame, with a kitchen and lounge in the front and a bedroom and nesting area in the back. Out the front of the house is an enclosed triangular run (to match the silhouette of the chalet), with a neat little hatch for the chickens to enter and exit from.

It's incredibly well made and carefully finished, but although the craftsmanship is impressive, that isn't the most important feature. What's more interesting is how he made it. For several weekends and a few evenings, Andrew would head out with our sons and our daughter to the garage. He has tools for them, real tools that work, because he believes it's important that they are able to make something. He gives them each a task and slowly helps them—with the patience of a Zen Monk—driving nails, drilling screws and cutting boards. He designs the run with them using offcut materials; the challenge of using them instead of buying new is part of the fun.

Together, they make something beautiful that is rife with all of the mistakes of learning. A board that was cut too short was glued and splinted back into place, and crooked nails were flattened into the board, but when it's done and Andrew does his magical adjustments to make it look square by shaving boards here and there, shimming areas and repositioning the hinges, it looks absolutely perfect.

The chickens love their perfectly imperfect home, and when we're home, we like to give them free range of the yard. They're hilarious in their little squadron of four, never venturing more than a few metres away from their fearless leader, Pecky. Yesterday, they were out roaming the lawn, digging and scratching in the dirt. We needed to run an errand and hopped into town, knowing that the chickens don't go very far. When we

got back, my son Gordon ran to check them. I was following and immediately noticed something wrong—Mayonnaise, Cornflake and Buckbeak were looking rather gormless and scattered (to be fair, that's how they usually look). Pecky was nowhere to be seen.

Gordon and I searched the yard. He was convinced she'd be found. I was feeling distinctly less hopeful. When we regrouped, I asked if he had seen anything. He said he'd noticed a big pile of pigeon feathers over by the cedar trees. Uh oh. By this time, Andrew had caught up with us. Taking Gordon's hand, we went over to see the feathers. It did not look good. Big tufts of grey and white feathers littered the yard in three clumps. I shepherded the remaining three chickens back into their coop and the boys spread out, combing to see if an injured chicken was hiding somewhere. By this time, Gordon had cottoned on; Pecky was his favourite chicken and he was starting to leak tears, demanding we go and get another chicken right now.

Andrew silently picked Gordon up and just held him. Gordon was absorbing the grief as he started to realize that big tufts of feathers was not a good sign. As we stood there accepting that we were evidently a three-chicken family, we heard it. A soft clucking was coming from a bush beside the feathers. Andrew put Gordon down and both of them peered into the depths of the bush. Pecky was there, looking half like a normal chicken and half like a naked chicken. Whatever had gotten her had pulled the feathers off her rear end, but other than looking weird, she was absolutely fine. Andrew coaxed her out, gathered her up and returned her to the coop.

The next day had Andrew and the kids back in the garage. He was consulting with them on if we needed a larger enclosed run for maximum chicken freedom and safety. The kids were convinced that the chickens should be kept shut in, safe from everything in the

world that likes to eat chicken. Andrew wasn't convinced. He believed that we should be more careful, letting the chickens out when we were in the yard to provide some level of deterrent. But he had a different view on the life-threatening risk that waits for chickens who wander beyond the fenced area.

Andrew was an emergency-room nurse for years. Each shift, he saw the impact of the one-in-a-million. Car accidents, suicide attempts, families ripped apart by tragedy. He saw the hammer injuries and the sawn-off fingers. And yet, he encourages our kids (and our chickens) to take risks. In his infinitely unflappable manner, he sees that the risk of living life—by having

the freedom to wander the green grass of the lawn and dig for bugs in the garden—is better than the risk of a self-imposed prison in the chicken run.

Andrew and the kids are planning their next building project. I'm not sure what it will be, but I'm certain it will involve minor hammer-related injuries and many more hours by Andrew than it would take for him to simply build it himself. And it will also contain the wisdom of a father who knows how to love through the act of building—building capability, building pride, building love.

Teresa Waddington lives in Aberdour, Scotland.

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 _____
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 New Membership Renewal of 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.

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The Alberta Teachers' Association (ATA) requires consent to publish personal information about an individual. Personal information is defined as anything that identifies an individual in the context of the collection: for example, a photograph and/or captions, an audio or video file, and artwork.

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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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GEOEC Contacts

President

Court Rustemeyer
president@geoec.org

Journal Editor

Alison Katzko
akatzko@gmail.com

ATA Staff Advisor

Tim Jeffares
tim.jeffares@ata.ab.ca

Complete contact information for the GEOEC executive is available on the council's website at www.geoec.org.



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