Connections

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Illuminating Stories: Capturing Adventure through Reflection.

Photo Credit: Court Rustemeyer.

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 journal, *Connections*. We are also active on Facebook (www.facebook.com/geoecalberta) and X (@GEOEC), where current information on PD opportunities and initiatives in Alberta can be found.

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Cover Photo

Under the soft glow of a candle, young explorers immerse themselves in the art of storytelling. With journals open and pens poised, they translate the whispers of the wilderness into words—capturing moments of adventure, growth and discovery. Storytelling isn't just about recounting experiences; it's a powerful tool for deep reflection, allowing students to process their journeys, connect with nature and share their unique perspectives. At GEOEC, we believe that every story told is a bridge between the wild places we explore and the wisdom we carry forward.

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Submissions Information

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

Articles can be submitted year-round. Please also include your mailing address and a short biography with your story or article. Submissions can be emailed to abihenneberry@gmail.com and djmoroz@gmail.com.

Consent is required to publish personal information about an individual. Including a *Personal Information Protection Act* (*PIPA*) form (provided at the end of this issue) is mandatory for any submissions that include students' or any other individuals' personal information, which can include but is not restricted to photographs and captions, artwork, poetry and any other such submissions. A parent or guardian must sign a PIPA form for a student younger than 18 years of age.

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Editors' Message: Illuminating the Path Together

Welcome to this edition of *Connections*, a journal dedicated to celebrating the stories, experiences and reflections of educators who bring the outdoors to life for their students. Each contribution to this issue underscores the power of storytelling as a tool to inspire, connect and deepen learning in meaningful ways.

As you read through this issue, you will encounter a rich tapestry of journeys that span the globe and the soul. From the icy reaches of Antarctica and the lush intensity of tropical trails, to the quiet, vital lessons found in a year of tending to plants in a junior high classroom, these pages prove that the world is an infinite classroom.

On the cover of this issue, we see a young explorer under the soft glow of a candle. This image serves as a powerful metaphor for our work. Outdoor education provides light; it is the spark of curiosity that flickers when a student discovers a fossil in a glacier basin or masters a numeracy concept through the physical act of exploring a forest.

Our contributors this month remind us that "going away" is often the best way to get closer to home. You will find practical strategies for aligning literacy and math with the natural world, alongside deeply personal accounts of living an "examined life" through the lens of the wild. These articles highlight that stepping outside is not merely a break from routine but a profound pedagogical shift that allows students to explore their identities, develop resilience and build a lasting sense of place.

What stands out in every contribution is a strong sense of commitment to land-based learning, fostering curiosity and nurturing a connection between students and the world around them. We are continually inspired by educators' willingness to share their journeys. Their stories remind us that outdoor education is not only about where we go, but about how we reflect, adapt and grow through those experiences.

We hope this issue encourages you to continue sharing your own stories, exploring new paths and finding fresh inspiration in the outdoors.

To accompany this message, you will also see a photograph of our GEOEC executive team. As editors, we feel it is important to recognize that our "light" is truly the community of people who support this work. This journal is made possible by our authors' dedication, teachers' passion and specifically our executive team's tireless efforts. All of them work behind the scenes to support excellence in teaching, ensuring that outdoor education remains a vibrant and essential part of the Alberta landscape. They are the steady hands that keep the candle burning, allowing us to share these stories of growth and discovery with all of you.

May these pages serve as your own "candlelight," guiding you as you lead your students into the wonders of the wild.

Alison Katzko, Abi Henneberry and Darren Moroz

President's Message

As this edition of *Connections* finds its way into your hands, I am struck by how quickly a year can pass and how much can occur within it.

This past year has been one of steady movement for the Global Environmental and Outdoor Education Council (GEOEC). Across Alberta and beyond, educators have continued to find ways to bring learning outdoors, to ask big questions about place and purpose, and to create meaningful experiences for students even during uncertainty and change. Whether through classroom practice, outdoor excursions, professional learning or quiet moments of reflection, our community has shown a deep commitment to environmental, outdoor and global education.

What continues to stand out to me is not just *what* we do but *how* we do it. Collaboratively, thoughtfully and with a strong sense of care for students, colleagues and the places we learn from. GEOEC exists because of a shared belief: learning rooted in our connection to land, community and each other matters deeply.

Looking ahead to the coming months, I feel a growing sense of momentum. Spring brings renewed energy, new ideas and opportunities to reconnect, both outdoors and with one another as a professional community. GEOEC continues to focus on supporting educators through meaningful professional learning, sharing practical resources and creating spaces where voices from across our field can be heard and valued.

This journal is one of those spaces. Within these pages, you'll find stories, reflections and ideas that reflect the diversity and creativity of our membership. I hope they spark curiosity, affirm your work and encourage you to try something new, whether that's a lesson, a conversation or a different way of seeing the world alongside your students.

Thank you for being part of GEOEC. Your commitment, generosity and willingness to share your practice strengthen this community in ways that extend far beyond a single event or publication. I would also like to take this opportunity to sincerely thank each and every member of our executive council for their time, dedication and tireless efforts to inspire and support teachers across the province. This council would not be where it is today without this incredible and committed team, and I look forward to what the months ahead will bring as we continue this journey together.

If GEOEC sessions would be beneficial at a convention, conference or PD event near you, please contact us so we can set something up.

Please keep up to date by following us on X, Facebook and Instagram. Do not hesitate to send us a note with any questions you may have. A huge thank you to all teachers across the province for your amazing work in your communities. Best of luck with all your adventures, and hopefully we will see you on the trails soon!

Court Rustemeyer

Camp GEOEC 2024

A Gathering of Outdoor Educators and a Celebration of Connection

Court Rustemeyer

As the crisp November air settled over our gathering, a quiet buzz of excitement filled the space. Educators from across Alberta arrived at Camp GEOEC 2024, bundled in layers, carrying notebooks and ready to immerse themselves in a weekend of hands-on learning, collaboration and adventure. From the first welcome circle to the final moments of reflection, Camp GEOEC was more than just an event—it was a testament to the power of outdoor education and the community that drives it.

A Weekend of Learning and Connection

Camp GEOEC was designed to be an experience, not just a conference. Gone were the fluorescent-lit meeting rooms and PowerPoint presentations; instead, educators found themselves engaged in fire-building workshops, outdoor leadership discussions and skill-based sessions that embraced experiential learning. Whether it was refining navigation techniques, diving into Indigenous Land-based education or learning creative ways to integrate sustainability into the curriculum, every moment was filled with hands-on exploration.

We had the privilege of being guided by incredible keynote speakers throughout the weekend. Hal Eagletail opened the event with powerful storytelling, grounding us in the Land and reminding us of our responsibility as educators and stewards of the natural world. Gabrielle Weasel Head, PhD, challenged us to think deeply about Indigenous Ways of Knowing and how we weave these teachings into outdoor learning. And, to close the event, legendary athlete Will Gadd left us in awe with his tales of adventure and resilience, inspiring us to push our own limits—not just in the outdoors, but in how we engage and lead as educators.

One of the most memorable moments of the weekend was our Film Night, where we gathered to watch *Yamnuska: Ragged Edge* (2023). The film transported us to the dramatic cliffs and rugged terrain of Mount Yamnuska, offering a gripping look at its climbing history, the evolution of risk-taking in the mountains and the deep respect that adventurers hold for these landscapes. The room was silent in moments of tension, filled with gasps at daring ascents, and alive with conversation afterward as we reflected on the film's themes of challenge and perseverance, and our own relationships with the wild spaces we teach in. The

evening reminded us why we are drawn to the outdoors: not just for its beauty but for the lessons it teaches us about resilience, humility and respect.

A highlight for many attendees was that every session and workshop took place outdoors. Conversations flowed freely, people shared stories, and the echoes of laughter and discovery reminded us all why we do this work. One participant summed it up perfectly: "This was more than professional development—it was a chance to reconnect with why I love teaching outside."

Reflecting on the Impact

What made Camp GEOEC special was not just the knowledge gained but the relationships we formed. The weekend reinforced the importance of community in outdoor education; learning from each other, supporting one another and collectively advocating to get students outside are all essential. The informal moments, whether sitting around a fire or sharing a meal, were just as impactful as the structured sessions.

As an organizer, I was reminded of the power of pausing and how stepping away from our daily routines allows us to reflect, reset and return with renewed purpose to our roles as educators. The feedback from attendees echoed this sentiment: the event was not just about skill building but also about rekindling passion for outdoor learning.

Looking Ahead

Camp GEOEC was just the beginning. As we move forward, the conversations and connections made during the weekend will continue to shape the way we support outdoor learning in Alberta. We are already looking ahead to future gatherings, where we can build on this momentum and continue fostering a network of passionate, engaged educators.

For those who attended, I hope the experience stays with you—the cold morning air, the warmth of shared stories and the inspiration to bring more students outside. And for those who could not make it this time, we will see you at the next one.

Let us keep exploring, learning and leading—together.

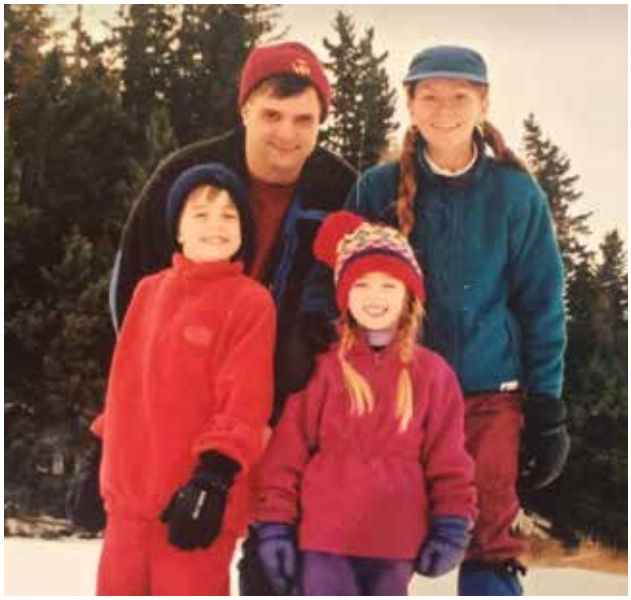
You can visit our website, www.geoec.org, for updates.

Court Rustemeyer

Featured Outdoor Inspirations

I will be forever inspired to facilitate outdoor learning because of the positive, lifelong effect it has had on my family. This picture reflects the importance of our time spent in Elk Island National Park, a hidden gem less than an hour away from Edmonton, Alberta. We have enjoyed all four seasons at the park, watching bison life cycles unfold and witnessing many species adapt through seasonal transitions. Nature, and time spent in it, have proved to be the greatest educator and equalizer. It has been an opportunity to make and resolve mistakes, and has created a foundation for our children to live well in our beautiful, imperfect world. We have exposed them to the idea that we are innately connected to everything on this planet. The sooner they can embrace this thinking, the easier it will be for them to appreciate their positions as stewards of the earth and as global citizens. To this day, our kids live as outdoor adventurers, which drives my teaching from an evidence-based perspective!

Abi Henneberry



As a first-year teacher, outdoor learning is incredibly inspiring because it reminds me how much I still have to learn. Nature itself is a teacher but so are the people around me. There are invaluable learning opportunities in being outside with experienced educators, community members or anyone passionate about the natural world. I am absorbing their different approaches, their unique connections with students and their deep understanding of the environment. These shared experiences are helping me carve my own teaching path. I am learning to lean on others' wisdom, value their diverse talents and incorporate their passions into my practice. It's through these collaborative moments, learning together in nature, that I am discovering what kind of teacher I want to be.

Jessa Clarkson

Teaching outdoor education inspires me because of the new ideas and perspectives students bring. I enjoy seeing the unique ways they use to express themselves through painting and writing. Watching their confidence grow through this process is rewarding! Seeing students explore and find meaning through art and journaling encourages me to keep learning alongside them.

Carissa Esau

Teaching outdoor education is inspiring because it allows me to witness firsthand the transformative power of nature on my students. Fostering personal growth, connections to the environment and a deeper understanding of themselves through hands-on experiences in the outdoors often leads to increased confidence, personal resilience and a greater sense of community.

Tyler Dixon

Watching my students' (and my own children's) faces come alive in nature reminds me of the deep connection they need with the natural world. Outdoor exploration not only sparks curiosity and wonder but also gives students a sense of belonging and stewardship for the environment. The more opportunities students have to touch the trees, listen to the birds and walk upon the land, the deeper their connection grows to what truly matters. This makes every moment spent outdoors worth the journey!

Paula Huddy-Zubkowski

In an age with so many digital influences, there is nothing greater than experiencing the amazingly beautiful outdoor world we are blessed to have in Alberta. I am inspired by the wonderful children I have taught in outdoor PE classes over my 35-year career and the incredible team of educators that make up the GEOEC Specialist Council of the ATA. I am challenged to explore unique areas of my home and places worldwide from the wonderful mentorship opportunities that exist through this dedicated group of people.

Darren Moroz

I am deeply inspired by watching my students build relationships and familiarity with places that I went on adventures to as a student. After the Horse River wildfire in 2016, many of these places were deeply impacted. But watching the forest revitalise itself reminds me of the opportunities we have to find lessons of resilience and perseverance just outside our school yard. When our Take Me Outside Club students excitedly recount previous excursions or burst out the doors to tell their parents what they did today, it reminds me how powerful outdoor learning can be and how it can ignite joy in education.

Chelsi Ryan

Learning outdoor education games inspires me because of the new activities I can bring back to the classroom. I enjoy working with other teachers outdoors and generating new ideas to incorporate into my teaching practice. Having the opportunity to participate in games reminds me of how fun it is to play outdoors and the importance of getting outside for our students.

Jessica Kaminski

Taking my students outdoors sparks curiosity and invites fresh perspectives as they engage with the vibrant world around them. My global teaching experiences have shown me that people of any age or background feel more healthy, happy and connected when they are in nature. I love witnessing students' unique expressions through art and writing, and it's truly rewarding to see their confidence grow as they capture their observations and feelings. Each outdoor adventure transforms learning into an inspiring journey, where we all learn together and discover the endless wonders of the natural world.

Alison Katzko

Exploring landscapes like this with students reminds me of why I became an outdoor educator—to foster connection, resilience and stewardship through shared experiences in nature. I am especially inspired when I see students leading the way on their own adventures, building confidence and a lifelong connection to the outdoors.

Court Rustemeyer

There is no better feeling than having a student connect with something outside and want to show you what it is. This student was outside at recess and found a beetle. He would not rest until he found me and showed me what he had found. Previously, he would not have cared; he might have even stepped on it. Now, he pauses for a moment to find the beauty in a small creature. When I teach outside, I want students to connect with something in nature; for this student, it was an insect. I aim to find the "beetle" for all my students.

Samantha Ur

Featured Outdoor Locations

Valley of the Five Lakes

Tyler Dixon

Just south of the Jasper townsite, situated in a small valley, are five picturesque lakes. Unsurprisingly, the area is known as "The Valley of the Five Lakes." However, do not let the unoriginal name fool you; the trail that weaves around and between the lakes has jaw-dropping scenery and is breathtakingly beautiful.

Five Lakes.

Two years ago, the executive team of the Global, Environmental & Outdoor Education Council (GEOEC) hosted our annual fall retreat at the Palisades Centre, east of Jasper. During an afternoon team bonding experience, we ventured to the Valley of the Five Lakes to stretch our legs and experience the natural wonders in Jasper National Park. Needless to say, we were not disappointed!

GEOEC executives. Photo credit: Alex Dunkley.

The trailhead, known as P15 on Parks Canada's online map, is just 9 kms south of the town, along Highway 93. From the parking lot, Trail 9A meanders through a forest of lodgepole pine before reaching Wabasso Creek. A boardwalk provides access across the creek and the surrounding wetlands. Shortly after the boardwalk is a junction. Our group opted to stay on 9A, which ultimately leads to Fifth Lake. There is a small dock and a bench here where you can admire the view.

Travelling along the lake. Photo credit: Tyler Dixon.

After snapping the requisite photos, we continued along 9A and reached Fourth, Third and Second Lakes. The lakes are all different depths, resulting in varying shades of blue, green and teal. Photo opportunities are endless, and the colours of the lakes need to be seen in person to be truly appreciated. We were there in early Autumn, and it was warm and calm, ideal conditions for both photography and to be outdoors.

Colours of the Five Lakes hike. Photo credit: Tyler Dixon.

Do not forget to visit the bright red Parks Canada Adirondack chairs overlooking Third Lake. Parks Canada placed more than 400 such chairs in some of the most spectacular locations across the country. How many have you come across in your travels?

Between Second and First Lake is Trail 9B, which we opted to take to complete a loop through the valley. Those more inclined can stay on 9A, which circumnavigates the entirety of First Lake and returns to the parking lot on Trail 9. However, this option doubles your hiking distance as it adds another 4.7 kms to your route.

Five Lakes hike.

Our hike was approximately 4.6 kms, with a net elevation gain of 66 m; however, there are enough ups and downs to make it feel like more of a workout than the statistics suggest. The valley is very popular with tourists and locals alike and provides an excellent option for families looking for a relatively easy trek through the woods.

Spending time in reflection. Photo credit: Tyler Dixon.

It is worth mentioning that at the time of this writing these trails were closed. The devastating wildfires that tore through Jasper National Park last summer resulted in significant damage to many areas of the park, including the Valley of the Five Lakes and the surrounding area. Assessments were ongoing and the area was to remain closed until further notice. Please consult current trail reports before venturing out.

Mental Health Outside

A Year of Plants: Lessons from a Mixed-Grade Junior High Class

Maya Willms

It has always been clear to me, and most likely to many of the readers of this journal, that being around plants can support the well-being of children, youth and adults alike. Numerous studies conducted in health care, education and community health indicate the need for a relationship with the natural world. In schools, teachers face a myriad of social, mental, emotional and physical health complexities personally and with students and colleagues. Many of these challenges can be improved with increased connection to plants. For instance, being exposed to natural spaces can improve concentration levels (City of Portland 2010; Keniger et al 2013; Kjellgren and Buhrkall 2010; White et al 2017). Similarly, students tend to show better performance and attention in academic subjects when they have a view of nature and plants while learning (Li and Sullivan 2016). Concurrently, stress reduction is a common benefit globally for patients in health care systems, resulting in reduced anxiety, lower levels of cortisol and improved changes to nerve activity (Alvarsson et al 2010; Beukeboom et al 2012; Bowler et al 2010; Park B et al 2010; Park S et al 2017; Russell et al 2013). The research in this area is so extensive that neighbouring disciplines have discovered the vast and holistic benefits of connecting with nature. The concept of *biophilia*, which Hall and Knuth (2019) define as "humans' innate tendency to seek connections with nature and other forms of life" (p 31), has led to the emergence of biophilic design in architecture and interior design, prioritizing concepts of biomimicry and the inclusion of plant life in interior spaces. Elzeyadi (2011) and Windhager et al (2011) note that biophilic workplaces that offer views of nature and exposure to natural light have led to increased productivity and focus. Despite the growing research in this area, we continue to see obstacles to the application of these benefits.

I currently work in a mixed-grade junior high classroom at a school following a unique setting calendar. This is my fourth nonconsecutive year teaching students in Grades 7, 8 and 9. Some of my students can attend to learning at their grade level, while others have significant gaps in their learning. Many of my students have had negative experiences in school. We use a modified curriculum, meaning that we pull from different areas of the K–9 program of studies and typically base our learning around themes that draw from a variety of areas in the curriculum. At the beginning of this school year, I asked my students if they enjoyed being outside. Many responded, "it depends." When I asked them if they would like to do some gardening this year and work with plants, many of them said *no*. I will admit, at first, I was disheartened, but I remembered a piece of advice that a teacher once gave me: *Do what you love, and others will see the love in it*. As I write this, we are six months into the school year, and my students are noticeably more engaged; they also experience fewer challenging behaviours when we are working with plants. Despite

many challenges along the way, I have found ways to weave our year of plants into different aspects of the program of studies. As a new mother, my work–life balance has been tested more than ever, so I have had to proactively set up boundaries with my students. Here are some of the statements we have agreed on:

- "I am going to add a living wall and plants into our classroom, but they need to be cared for and respected. If they are respected, we all benefit."
- "We will do many hands-on and meaningful tasks this year, but I can't do it all the time. When our lessons seem a bit boring, I need you to trust in the process. There are peaks and valleys in our classroom, sometimes we have a lot of fun and sometimes our days are a bit more low-key, and this is okay."
- "I am going to try a few new things that might be exciting, but they might also fail and if they do fail, we can handle this and learn from it. Teachers are human beings too and we learn from our mistakes."

Normalizing teachers as members of the classroom community can help students take risks and trust in their learning process again. They need to know that teachers can be vulnerable and show humility. We can set the example for a growth mindset and model how a community of learners can support one another. In the next section, I will share some of the ways we have engaged with plants throughout the entire school year. Although field trips are an important aspect of engaging with the natural world, they can be time consuming and require extra resources, not to mention that they can be daunting for many teachers. In the following sections, I will focus on learning with plants in all seasons and share ways of doing so with your immediate community, school, classroom and school yard.

Spring—Plant and Prepare

Design Model Greenhouses

As a part of our mixed science units (heat and temperature, light and optics and biodiversity) we learned about passive solar greenhouses, how the greenhouse effect works in relation to climate change and how we can create microclimates to control humidity and temperature to help plants grow. As a STEM (science, technology, engineering and mathematics) project, students designed their own greenhouse using designated recycled materials that were provided. We used the seeds that we had saved from the garden the prior fall, and each student chose a different variety of seed to test the germination rate with. Students recorded and calculated germination rates and made regular observations and recommendations for which varieties of seed should be shared with our community and which should be retested or composted.

Plan and Plant a Garden

Students researched companion plants, and hardy and drought resistant plants. They also tested their planting skills in our school garden. From the previous fall, we had conducted soil samples and researched which plants would grow well in what soil types. Students also made recommendations for how to amend the soil using compost, mulch and other natural methods.

Grow Tree Seedlings

We collected pine and spruce cones outside in the early spring. Pinecones and spruce cones need *stratification* (or exposure to long periods of cold weather) in order to germinate. After sitting outside all winter, the seeds were ready to be harvested. We placed several pinecones of the same variety in a paper bag and let them dry out indoors. After one week, we shook the bags vigorously and then dumped the contents onto individual workspaces. Students tried to identify which part of the pinecone residue looked like a seed. Once the students had found the seeds, they placed them individually on a wet paper towel and stored them in a plastic bag somewhere dark. We checked the seeds regularly to see if there was any growth. This can take several weeks depending on the seed. Students then noticed how many seeds had germinated and how many were not viable.

Grow a Three Sisters Garden

We regularly grow squash, corn and beans and learn about symbiosis and companion planting. The three sisters (corn, squash and beans) support each other, and they all benefit from the relationship. There are several resources available on this topic. It is important to note that while three sisters gardens were not historically grown in this region, they were later adopted here. These three plants are hardy and can often handle Alberta summers with little maintenance. The squash leaves protect the garden from pests and predators, and the beans fix the nitrogen in the soil. These three plants grow happily and abundantly together.

Grow Your Garden Community

Growing a school garden can be daunting, particularly because teachers are typically not around during the summer months. Invite and include students' family members, community members and students to take part in all aspects of growing the garden. Encourage them to help take care of the garden during the summer months. Arrange a plan for watering and harvesting in the summer. Many plants, like beans, produce more when they are harvested more.

Plant a Pollinator Garden

There are several grants available to plant pollinator gardens in Alberta. For years, the Canadian Wildlife Federation gifted perennial pollinator plants to schools who applied. Finding a space in your school yard for a pollinator garden or a rain garden can be an easy way to grow a perennial ecosystem that initially requires some work but eventually requires little maintenance and care.

Summer—Abundance

Create a Summer Garden Club

Encourage community members from the school to visit and gather from the garden; invite family members to join a committee and help manage watering and weeding the space throughout the summer months. The more people involved in caring for the garden, the less likely it is to be vandalized or robbed. If you are ambitious, you can install an automatic watering system with a drip line and timers available in the school. Or you could arrange for rain barrels or totes and have watering cans available for community members to come by and water. You may have a group of teachers and staff who sign up for a week in the summer each to come by and check on the garden. Community and school gardens are easier to manage and more enjoyable with more people involved in the work, who can then also enjoy the benefits of growing food.

Outdoor Photo Challenge

If you have students returning to your class or school in the following year, you can hold a photo challenge to encourage students to spend their summer in natural spaces. You can introduce various categories, award prizes and design related assignments when they return to school after the break.

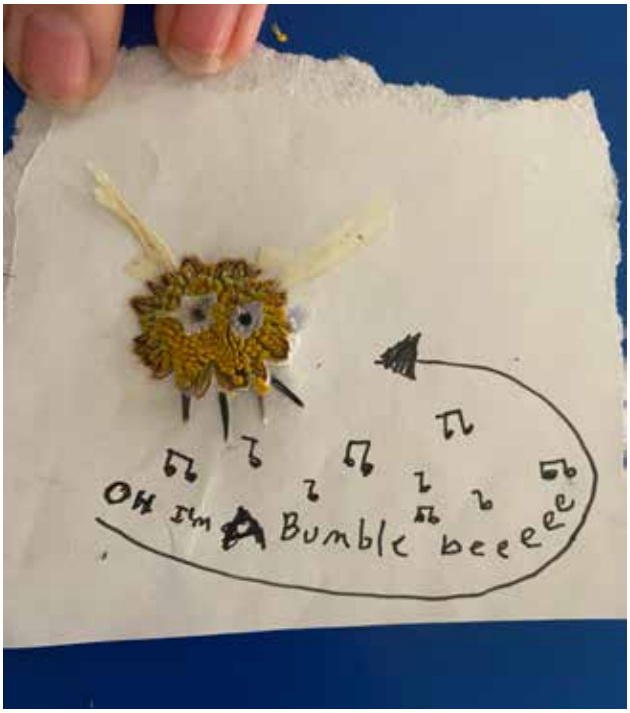
Fall—Harvest

Harvest from the Garden

Enjoy the abundance of the garden after the summer season. Even if you only grew zucchinis, you could make zucchini muffins and enjoy these as a class. It is important for students to experience the entire life cycle of a plant. One year, our school grew potatoes and had a French fry and poutine day. In other years we have made soups and stews for the whole school. Including the community in a celebration and feast from the garden helps build a greater sense of connection for students and adults.

Seed Saving

This year, we took on a larger project of trying to save the seeds from the garden. We investigated the reasons for seed saving and focused our learning on sustainable food systems, examining case studies about global food systems and seed saving efforts across the world. While studying biodiversity, we discussed the need for heirloom varieties of seeds and learned about hybrid seeds. We determined which plants in the garden were perennial, annual and biennial and investigated the easiest and most productive seeds to save. We learned about dry and wet seed saving methods and even discussed stratification to determine which seeds we would focus our energy on preserving. Students found the healthiest and most abundant plants and marked these as optimal seeds to save. In the end, we were able to save seeds from marigolds, nasturtiums, beans, peas, tomatoes, peppers, squash, cucumbers, sunflowers and a variety of other annual and perennial flowers.



Build a Flower Press

This year, we built simple flower presses in small groups, using donated scraps of wood planks, wingnuts, flat head machine screws and washers. The entire project was relatively inexpensive. We measured and cut our wood, sanded it down and used clamps and a drill to create the holes for the screws. Once assembled, we gathered recycled sheets of cardboard and cut them to the appropriate size. Using parchment paper, we gathered flowers and leaves and other plants from around the schoolyard and garden. We pressed the flowers between the parchment or wax paper and then between the two sheets of cardboard. After our harvest was complete, we placed the stacks of cardboard between the two boards of the press and tightened the wing nuts, leaving them to sit and dry for the winter months.

Conduct Soil and Water Samples

We gathered soil from a variety of areas in our garden and made soil profiles to see the layers of clay, loam and sand. After recording our findings, we conducted a soil chemistry test using a store-bought kit. Students tested for nitrogen, phosphorous, potassium and acidity. Based on these results and the results of the soil profile, students researched which plants would grow well in this environment and what kind of amendments would need to be made to create optimal growing conditions. We focused on natural fertilizer and soil amendment methods and had discussions about herbicides, pesticides and other chemicals used in industrial agriculture. Since our school promotes regenerative agriculture and gardening, we opted for natural methods. Students then wrote letters and made videos discussing their findings and their recommendations, which they presented to our horticulture instructor.

Winter—Rest and Reflect

Design Seed Packets

Students were asked to design handmade and digital seed packets for the seeds we collected in the fall. We prioritized the seeds that had a higher germination rate when we tested them with our model greenhouses. We included the school's farm logo and the different seeds that we had harvested. For the random collection of flower seeds that were harvested, we came up with creative names using alliteration, such as Michelle's Magical Mix. We plan to use some of these seeds in our garden in the spring and will gift seed packets to family members and community members. All the students in the school will get a packet of seeds to take home with them. Students also brainstormed ideas about how we could connect with others in our community and who we could give the seeds to. Some suggestions included gifting them to our neighbouring schools and daycares.

Create Dried Flower Art

Using the pressed flowers from the fall, we created artwork using glue and Mod Podge. Some students arranged their flowers in a pleasing bouquet, while others used them to create shapes of animals and other images. These art pieces were intended to be used as gifts and to be framed and put up in the school office.

Propagate Plants

We learned about plant propagation and took cuttings from house plants, bringing the cuttings all together and watching them grow. If you have enough cuttings, you could plant them in individual pots and sell these as a fundraiser to purchase soil and other garden supplies. You can make learning about seed and plant propagation more exciting by experimenting with fruits and veggies from the grocery store. We have propagated celery, lettuce, carrot tops, lemon seeds, pineapple tops, avocado seeds, a variety of herbs and even demonstrated how potatoes go to seed.

In conclusion, our students and schools need more connections to nature. Given the increasing barriers to outdoor programming, it can be easy to shrug this responsibility off, but a little bit of effort and even just one or two small projects for every season can help build student engagement and help them understand their place in the world. Plants belong in the world of learning, and our students benefit greatly from these interactions.

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Articles

Taking the New Alberta Science Curriculum Outdoors:

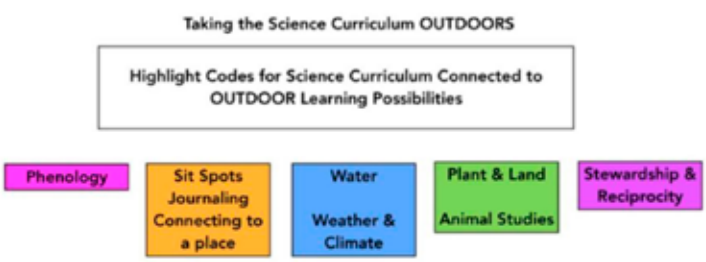
A Guide for Teachers

Written By: Andrea Barnes and Cheryl Babin

Let's face it, curriculum changes can require significant adjustments. Educators must adapt to new structures, expectations, and topic areas, which often involves reworking established routines and learning materials. All which takes a significant amount of time. For Alberta Parks educators, this means revisiting and updating the programs and resources offered to teachers and students in parks.

While reviewing the new K–6 science curriculum, it was noted that the word "land" appears 476 times. This indicates continued opportunities to support outdoor learning and help students connect with Alberta's natural landscapes.

To support teachers in continuing to take learning outdoors, Alberta Parks partnered with our professional development colleagues at the Calgary Regional Consortium. Together, we identified six core learning opportunities that appear across the organizing ideas and grade levels. Then we took it a step further, we literally colour-coded the entire curriculum document to make it easier to navigate. You can find it linked here or by scanning the QR code.



Please note, **you'll need to download this document** to see the colour-coding.

1. Phenology
2. Sit Spots / Journaling
3. Water Walks (Division I) and Weather & Climate Watch (Division II)
4. Plant & Land Stories
5. Animal Studies (Note: *plant and animal opportunities are both coloured green as they appear together in the curriculum*).
6. Stewardship & Reciprocity

Want to see related outcomes and KUSPs? http://bit.ly/abscienceoutside or scan - MUST DOWNLOAD to see colour coding!

In this article, we have unpacked each of these six learning opportunities, showcased where it lives in the curriculum, for each grade, and provided examples as to how this might look in practice with links to resources. Our goal is to help teachers take this new curriculum outdoors and improve nature connections for youth in our province.

1. Phenology

What is it? Phenology is the study of seasonal changes in plants and animals, particularly how they relate to climate. By observing natural events like plant blooming or animal migration, students can understand the cyclical rhythms of nature.

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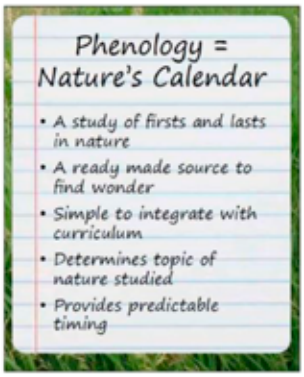
Where Does This Live in the Curriculum?

In K-3 you'll find:



- Seasonal changes, observations using senses, predictions.
- Environmental interactions and seasonal changes including animal behaviour, migration, patterns, life cycles, observations using senses, recording data.
- Earth landforms and water relation to the sun, patterns, observations & predictions, recording data, landforms & bodies of water.
- Seasonal changes, animal behaviour through seasons, water cycles, forces moving objects.

In 4-6 you'll find:

- Warmth and sunlight throughout the year, water levels, organisms moving for warmth, weather patterns, human use of parks throughout the year/seasons, tracking astronomical phenomenon & lunar calendars.
- Tracking organisms in flight, weather patterns, availability of energy and natural resources, climate patterns over time, characteristics of regions and climates, precipitation, predictions, data interpretation, Indigenous knowledge systems and western tools, animal behavior patterns & cycles.
- Bodies of water sustaining life throughout seasons, components of Earth's systems that interact to affect climate, changes in climate, document extreme weather events, collaboration between scientists, Elders and Traditional Knowledge Keepers that understand effects of weather on people and the environment.

How Might This Look in Practice?

Deciding how, where and when to record observations will depend on your community and the amount of time you can revisit your outdoor learning places. Invite your students to 'get to know your neighbours' during your outdoor learning adventures. Setting up a routine where you collect data throughout the year will result in meaningful learning and lead to natural curiosity, inquiry and creative extensions.

2. Sit Spots & Journaling: Connecting to a Place

What is it? A sit spot is a special place where students regularly sit, observe, connect, and document what's happening in nature. This practice builds attention to detail, fosters mindfulness, and nurtures a personal connection to the land.

Where Does This Live in the Curriculum?

Throughout the grades we find the following:

- Make observations using senses.
- Document, draw, measure, count, record, capture, photograph.
- Write adjectives, adverbs, poems, predictions, reflections, questions, inferences, narratives, letters, journals, thoughts, dreams and more…
- Draw, paint, print, press, sculpt, mold, sketch, shadow, scratch and shape.
- Listen to create sound maps, explore vibrations, ponder, focus, think, rest, rejuvenate, relate and revive.
- Problem solve, innovate, create, consolidate, critique, analyze, summarize and surprise.

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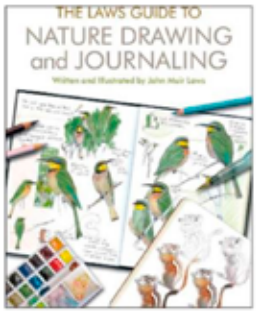
How Might This Look in Practice?



Collect sit spot prompts and consider purchasing this new resource: Sitting with Nature: An Educator's Guide to Sit Spots. Encourage students to keep a nature journal where they sketch, write, and document their observations. Over time, this practice will develop their understanding of both scientific processes and their personal connections to nature. John Muir Laws offers this FREE resource "How to Teach Nature Journaling" which is the 'go-to' resource for all things journaling.

3. Water Walks (Division I)

What is it? Water walks take us outdoors in search of puddles, ponds, streams and dew. On water walks, we notice where it collects, drips, drops and spills. Water can be touched, measured, rippled, splashed and moved. Water offers life and energy to living things in ecosystems. Water can be devastating and damaging, adventurous or appealing.

Where Does This Live in the Curriculum?

In the K-3 you'll find:

- Animal movement, observing landforms and the environment.
- Water movement and flow, needs of plants and animals, stewardship and taking care of water.
- How light travels through water, the components of earth, bodies of water, as well as flow and movement of water.
- Matter considerations - melting, freezing, evaporating, condensing, as well as the shaping of landscapes and changing earth's shapes.

How Might This Look in Practice?

Follow the water in your community, map it, discover it. Jillian Judson's "A Walking Curriculum", gives many walking prompts to help reveal the emergent curriculum. Water walks in many forms help us observe, record and play with water resulting in real learning. Try this water walk scavenger hunt and record your water walk observations on your phenological calendar and in nature journals.

Weather and Climate Watch (Division II)

What is it? Understanding and reflecting on weather and climate gets us outdoors measuring, recording, comparing, interpreting and reflecting. Climate change over time can affect land, plants, humans, and other animals. Traditional ways of living on the land have been impacted by climate change in various ways, such as changing migration patterns and access to hunting, harvesting, and fishing.

Where Does This Live in the Curriculum?

In the 4-6 you'll find:

- Conservation and presentation of Earth's systems, plants adapting to environmental factors.
- Weather is measured, tools are used, data is created, and patterns are interpreted. Climate impacts are considered.

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- Climate is compared and contrasted through current and historical observations. Solutions based approaches are considered.

How Might This Look in Practice?

Purposely observing and recording weather throughout the year helps students create and interpret their own data. Consider unique outdoor explorations such as analyzing snowpacks during the winter months. Play the Carbon Dioxide Game to help students understand how humans help and hinder carbon levels in the atmosphere. Look for stories on the land and how hopeful solutions are made in a changing climate.

5. Plant Stories

What is it? Plants tell stories throughout the season, letting us know of changes in climate, landforms, interactions with insects and animals. They represent growth and interdependence, cycles, and health of the environment. Plants create oxygen and make their own food. Plants can be medicinal, carnivorous, emotion-evoking, art worthy, construction materials and life-giving. What stories can you find within the plants on the land?

Where Does This Live in the Curriculum?

In the K-3 curriculum you'll find:

- Plants are living things, observe / compare needs and discover how we know they are living.
- Properties of natural plant materials, how they grow and how humans use plant parts.
- Soil properties, habitats, earth's crust, interaction of plants and animals.

In the 4-6 curriculum you'll find:

- Interactions between plants and animals, basic needs of plants, behaviours of plants, plants as resources, conservation, structures and classification of plants, locally found plants and sensory structures of plants.
- Plants in various geographical locations, farming practices, and plant functions.
- Plants as a method of taking action on climate change, biotic components of plants, preservation of ecosystems, photosynthesis, and Indigenous sacred plants, as well as reciprocity with plants.

How Might This Look in Practice?

Make plants part of your regular practice through storytelling and interactive games. Find some plant stories on the Kainai Plant index and play Build A Tree in your schoolyard. Use plants as an entry point for studying ecosystems, allowing students to investigate how plants support other living organisms. Monitor the arrival of plants and record them by using the Alberta Plant Watch program. Consider how plants are Structured for Survival by recording observations as you explore or the relationship between humans and plants with the lesson plan Parks, People, Plants and Animals.

6. Animal Studies

Animals are part of the interconnected web of life, integral to ecosystems across the Earth. Captivating and fascinating, humorous and mysterious, the study of animals helps us understand how the world works. Animals are part of relationships with each other, plants and humans. Competing, co-existing, caring and complex, animals and human interactions reveal stories of past, present and future.

Where Does This Live in the Curriculum?

In the K-3 you'll find:

- Environments include animals, animal movements.
- Animals are living things, observe/compare them to humans, what do they need to live? To thrive? How might humans help animals?
- Offspring and parents, how humans use animals and their parts, how human behaviours affect animals.
- Habitats, interactions of animals with plants and humans and the environment, food chains, predator / prey and survival.

In the 4-6 you'll find:

- Organisms' appearance and habitats, external structures of animals, sensory structures of animals.
- Animals farmed in Alberta, hunting, trapping and conservation of animals, evolution of animals over long periods of time, flight of animals.
- Biotic components of animals, characteristics of ecosystems and the animals within, humans and other animals rely on animals to meet needs, relationships between plants and animals, migration patterns of animals.

How Might This Look in Practice?

Studying animals will always be the hook for students to connect to the land and engage in outdoor learning. While outdoors, teach students to be observant of evidence of animals, discover the track stories found in the snow, and bring the ancient science of tracking to life. Play out the importance of animals through this Web of Life Game or Who am I Game. In the older grades, consider how wildlife is managed in Alberta and discuss, reflect and debate these techniques.

Stewardship & Reciprocity

What is it? Stewardship as the act of taking care of the land or doing 'good' for the betterment of the environment. Collaborative problem solving, responsibility and skill building. Reciprocity means the giving of 'gifts' as the land is always giving in return. Honoring interconnectedness, learning and listening to the land, 'knowing our neighbours' and forming relationships with the land.

Where Does This Live in the Curriculum?

In K-6 you'll find:

- Invitations to know and understand that the environment is important.
- Indigenous ways of knowing about the world, traditional knowledge, and the respectful, reciprocal relationships that allow for sustainability.
- Individual and collective actions we can take to protect, conserve and care for the natural world.

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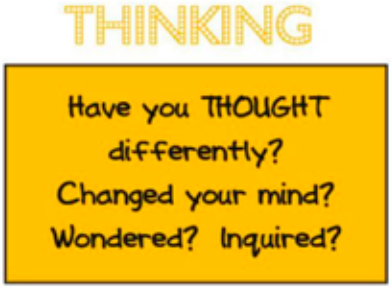
- Opportunities to learn about sustainability and practices that encourage healthful interactions.
- Understanding and demonstrating what care for the environment, and all living things looks, feels and sounds like.
- Stewardship and reciprocity with natural environments leads to feelings of connection and appreciation.

How Might This Look in Practice?

It's important to set up a routine of giving gratitude to the land you're teaching and learning on in consistent and meaningful ways. Teach students about the importance of taking care of the land and the concept of giving back. This could be through activities like community clean-ups or planting trees, however, remember that 'action' is a VERB and we can show our learning and caring by many means including thinking and feeling differently, having or sharing knowledge or sometimes changing behaviours. See the attached posters for ideas on action.



Conclusion

By embracing outdoor learning opportunities, you provide your students with the tools to explore science in meaningful ways. You'll help them develop competencies in critical thinking, problem-solving, and communication while forging a lasting connection with the land. Through outdoor teaching, students not only learn about scientific principles and become more naturally curious, they also learn to honour and respect the land. Consider viewing the new curriculum in a way that could bring multiple organizing ideas together at once and find your new favourite field trips and learning opportunities while lavishing in the benefits of being outdoors.

Special Acknowledgement & References

Cheryl Babin: Alberta Professional Learning Consortium
This article was adapted from a professional learning workshop delivered by Cheryl Babin and Andrea Barnes in 2024 and 2025

Reading this in print form:
All Alberta Parks Nature Source links referred to are found here:

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This article was reprinted from the Alberta Parks website (https://www.albertaparks.ca/media/3kljlrpn/taking-the-new-alberta-science-curriculum-outdoors-a-guide-for-teachers-updated-nov-2025.pdf) for inclusion in the Connections *journal. It appears in its original form with no alterations or modifications.*

Tales from the Trail

Court Rustemeyer

The morning begins like any other, but this time there are some unique movements in the house: the sound of a backpack zipper, the distinct crinkle of treat bags, and that unmistakable sense of adventure in the air. The energy is electric, the excitement palpable. I hover nearby, ensuring nothing essential gets left behind.

Snacks? Good.

Water? Great.

Leash? Fine, if we must.

But there's always the hope that this time he'll pack something truly important, like a squeak toy. (He never does.)

I do, however, see my red backpack. I know what that means … It is adventure time!

As we hit the highway, I hear the back window of dad's truck open. I love the feeling of fresh air on my face and watching the cars behind us, as we race to wherever we are heading. Doesn't matter to me where we are going, for I am in one of my happy places, on the road with dad!

By the time we reach the trailhead, I can barely contain myself. The woods stretch out before us, alive with possibility. Every scent tells a story, every sound a call to action. I leap forward; my enthusiasm is boundless, ready to chase down every adventure nature has to offer. Pathways, squirrels, strange smells—it's all waiting for me out there. Even mud puddles (dad doesn't like those for some reason!) This is where I'm meant to be.

It might surprise you to learn that this tale is coming from me—Lucy, adventurer extraordinaire and professional trail partner. But let me tell you, life on the trail is better with four legs, a wagging tail and a best friend like dad who lets me live out my wildest dreams. Sure, they do the packing and driving, but I'm the real guide out here, the one who makes every hike, snowshoe and ski day unforgettable. Sometimes I even get to join dad on his adventures with students. I love those days because I get all the attention and so many butt scratches!

Why I Love Hiking (And Why You Should Too)

Here's the thing about us dogs: we're built for adventure. We love it all—climbing, sniffing, chasing, and yes, even getting a little muddy (sorry, dad!). And here's what I've learned about humans like dad: they might start a hike distracted or looking at their phone for weather updates constantly, but by the time we are a few feet on the trail, they're smiling like I do after a good belly rub.

We dogs bring a lot to the adventure world. I make dad laugh at least 10 times an hour, whether I'm tripping over a root (on purpose, obviously) or proudly presenting a stick twice my size. I also keep us moving. For some reason, I always seem to run three times as many kilometers than dad does. Maybe it's because I get distracted from time to time. When dad's ready to turn back, I give him the *look*—you know the one—and suddenly he finds the energy to keep going. When the hike gets tough, I remind him that life is about the journey, not the destination. Well, unless the destination has more snacks … Then you will find me there!

From My Pawspective

Being out in nature with my human isn't just fun—it's how we bond. Out here, there are no distractions, no phones (except when dad's taking my picture, obviously), just the two of us and the trail. Do you know how hard it is to look cute all the time?

I help dad notice things he'd otherwise miss: a bird perched on a branch, the way the sunlight filters through the trees, or the perfect spot to sit and take it all in. Personally, I love finding those spots where I can flop onto my back and roll and scratch. It feels so good!

So, if you're thinking about hiking with your dog, let me offer this advice: say yes. Pack the leash, the water bowl and all the treats. We'll do the rest. Whether it's chasing marmots, looking super cute at the lookout or just a lot of wagging tails, we promise to turn your hike into an adventure you'll never forget.

And who knows? Maybe you'll even learn to love mud as much as I do.

—Lucy (Court's Adventure Dog)

Top Five Tips for Hiking with Dogs

- Pack for Your Pup. Bring essentials like a leash, collapsible water bowl, poop bags and plenty of treats. Always include a basic first aid kit for your dog, especially if you are venturing into rugged terrain. Bonus points if you let your dog carry their own gear in a doggie backpack! It is very safe for dogs to carry up to 25 per cent of their body weight.
- Keep Your Dog Hydrated. Dogs can overheat quickly, so ensure that they have access to fresh water throughout the hike. Avoid letting them drink from streams or puddles, as these can contain harmful bacteria or parasites. Lucy loves water, so this can be challenging.

- Protect Their Paws. Trails can be rough on paws, especially in rocky, icy or hot conditions. Check your dog's feet regularly for cuts or irritation, and consider dog booties if the terrain is challenging. If you ever need a good laugh, Google *dogs in boots*; you will not be disappointed.
- Know the Rules and Be Respectful. Research whether dogs are allowed on your chosen trail and if they need to be leashed. Respect wildlife and other hikers by keeping your dog under control and cleaning up after them. Leave no trace. Remember not all hikers are a fan of dogs.
- Watch for Signs of Fatigue or Stress. Dogs do not always show that they are tired until it is too late. Pay attention to their pace, energy levels and breathing. If they seem sluggish, are panting excessively or seem hesitant to keep going, it is time to take a break—or head back.

With a little preparation and awareness, hiking with your dog can be a safe, fun and unforgettable experience for you both.

Breaking the Routine: The Power of Novel Experiences

Carissa Esau

In August 2024, I had the privilege of kayaking through the breathtaking Broken Group Islands off the coast of Ucluelet. While I am an experienced backcountry hiker, I had never been on an overnight sea kayaking trip. Many of the familiar rhythms of backcountry travel remained unchanged: the backpacking stove, the tent, the early mornings with coffee at sunrise. But navigating the open water, packing a kayak instead of a backpack and moving without the definition of a hiking trail were new challenges. However, the monotonous hours of paddling gave me time and space to reflect, drawing connections between my journey on the water and my experience as an educator. The change from my usual summer hiking routine was refreshing. The novelty of paddling brought new challenges, new conversations and memories, making me think about the role of novelty in my teaching practice.

I primarily teach junior high math and science, where it is easy to fall into the routine of workbooks, vocabulary drills, checkpoints and tests. While these tools have their place, I also recognize how their repetition can drain both my students and me! Having a premade booklet or a set of practice problems ready to go is convenient, but I also see how predictability can limit student engagement. One of my biggest

challenges is finding a balance between structure and novelty, ensuring students feel secure in their learning environment while also inspiring them. Just as a well-planned sea kayaking trip requires both organization and safety considerations, I strive to create a learning experience that provides stability while also creating space for students to explore new and exciting ways of learning.

I am learning that novelty is the "name of the game," whether in a kayak or in a school. While kayaking, I saw some of the most beautiful sunrises I have ever seen. I saw eagles, sea lions and seals. I fell asleep to the sounds of the ocean. I saw hermit crabs exploring tide pools. I learned how to navigate my boat in the ocean. Each of these moments was a reminder that learning is most memorable when it is tied to a new experience. If I can bring this same sense of discovery into my classroom—creating opportunities for students to engage with fresh ideas, unexpected challenges and hands-on learning—I could help create an environment rich with learning.

Outdoor education has been a key way to bring novelty into my students' learning. Stepping outside a four-walled classroom allows students to engage with the land in meaningful ways. Activities like snowshoeing and cross-country skiing challenge students physically while also encouraging perseverance. Community walks can prompt discussions about environmental awareness and connections between the classroom and the real world.

Nature journaling develops observation skills, creativity and mindfulness, helping students reflectively engage with nature. It has provided opportunities for my students to step outside and engage deeply with the land. By observing and sketching plants or noting weather patterns or unique light formations, students develop curiosity and a personal connection to science concepts. The shift away from traditional classroom routines has contributed to a sense of wonder, reinforcing that science is not just something learned from a book but something we experience and explore. Our science "wonder walks" are opportunities for my students to wonder about the world around them and create opportunities for authentic learning in a novel way.

My sea kayaking adventure served as a reminder of the important role of novelty in both personal and educational growth. Just as my new experiences on the water provided opportunities for reflection, I see how introducing fresh, hands-on learning opportunities in my classroom can foster students' curiosity and engagement. Whether through outdoor education, nature journaling or simply stepping away from the routine, as educators we have the opportunity to create an environment where students are inspired to explore, question and discover the world around them in meaningful ways.

Living a WILD, Examined Life

Cayla Wolever

"Our goal should be to live life in radical amazement … get up in the morning and look at the world in a way that takes nothing for granted. Everything is phenomenal; everything is incredible; never treat life casually."
Abraham Joshua Heschel

Picture this: 19 teens, sitting in a circle on the lakeshore in the afternoon sun, journals in hand. All are clad in wetsuits and personal flotation devices, with some in tutus as well. (Tutus are cool now.) We have been reflecting on topics such as community, wonder and expedition behaviour. Topics of connection, belonging and the *why* of outdoor expeditions have been discussed. Next, we will spread out on the beach for some journal time before we return to camp and dive into the flurry of dinner. Despite these days being full and "busy," it is still a slower pace than we are used to; we have stepped away from the frenetic pace of "normal." We focus on fewer things: eat, explore, stay warm, be in awe.

There is something about being out here, away from the drama and phones and homework and parents and sports and other pressures, that is so transformative and—dare I say—magic.

Mundane activities and moments can have a whimsical shimmer to them, like the first light of day, a helping hand or a warm cup of tea. On trips "out here," kids get comfortable being uncomfortable, they live in rhythms and routines they never thought they would; they get silly, and build a totally unique experience together.

Each day I have the privilege of teaching Canadian Rockies Public Schools' Wilderness Inspired Leadership Development, or WILD, program. It is a locally developed program, with curriculum covering hard skills as well as soft skills, such as lessons in leadership, personal growth and reflection, and group management. I have many talented and supportive educators who have paved the way for this program, and I also get to help shape how the program will look as we move forward. We paddle canoes, learn camp craft and survival skills, cook epic backcountry meals, Nordic ski and snowshoe, work with the avalanche control team and ski patrollers at Lake Louise Ski Resort, build fires and so much more!

My goal with WILD is to reach far beyond the cliches of getting outside and being active. I want our students to build the skills that they will need to navigate their high school and teenage years, their transition into adulthood, a changing world, challenging relationships and whatever mountains they may face.

We are using wilderness as a lens to see our lives in a different way. I want our students to "live an examined life," as Socrates would put it. We aim to build leaders who are adventurous, communicative, brave and confident problem solvers. More importantly, we are striving to help our students become collaborative, empathetic, kind, reflective and compassionate citizens. We want to facilitate personal growth by building resilience, emotional intelligence, self-awareness and curiosity.

Kurt Hahn, founder of Outward Bound, said "There is more to us than we know. If we can be made to see it, perhaps for the rest of our lives we will be unwilling to settle for less." Expeditions often show students that they are braver, stronger and more capable than they believed. This confidence boost can return with them to their everyday life.

We want to give students tools and options to live a healthy, big, beautiful existence. Cal Newport quoted Aristotle to highlight that "high quality leisure is essential to a life well-lived." We want students to have hobbies away from their phones, which require them to

move their body but in different ways (perhaps more accessible than many team sports). We want to help students, even just a little, to break the dopamine addiction of instant gratification. We are trying to train their brains to relax, be patient, demonstrate perseverance and enjoy delayed gratification.

Outdoor leadership is transferable to everyday life. It requires both wonderful and tough interactions to develop interpersonal skills, and it is significant hands-on work, which inevitably provides endless problem-solving practice. Being a diligent and resilient problem solver will set you up for success in any situation, and it truly is a skill that needs refining and practicing.

Our job as educators is to set students up for success to allow these experiences to happen—so how can we facilitate experiences that are meaningful and transformative?

We can introduce them to locations that are bursting with beauty and provide them with new and unique experiences. Although we thrive off routine, we need doses of novelty for a well-lived life. We need exposure to new spaces and faces, new movements, motions and muscles, new perspectives, ideas and angles. We can help students see how to appreciate each other. Wilderness is the great equalizer and forces us to rely on each other and on the structure of the team. We can give them time: to let their minds wander, to "sit in the struggle" in challenging situations, to reflect and to simply be.

These life lessons and skills can be gained through many avenues—literature and writing, scientific inquiry, sports, music—but outdoor pursuits are particularly rife with opportunity and possibility. Adventures are the single most transformational thing that have shaped my character, my skills, my career and my journey, and I hope that can be true for some of these curious young minds.

Most importantly, through these experiences in WILD, I want students to revel in the richness of our lives. This is easier to do in beautiful, wild places with less distractions. We are so trained to avoid discomfort, stew in negatives and distract ourselves that we can lose sight of the beauty around us. I want students to see the depth and beauty in their surroundings, in each other and in themselves. By taking Heschel's advice to "never treat life casually," I hope that we can lead fuller, happier lives.

My Journey to Antarctica as a Grosvenor Teacher Fellow

Tyler Dixon

The caller ID read *Sanford, NC*. Since I do not know anybody in North Carolina, I disregarded it as just another spam call. To my surprise, my phone buzzed indicating a voicemail had been left. Curious as to who would be calling me from Sanford, I listened to the message. The phone nearly fell out of my hand. It was 1 PM on February 16, 2024, and I had just ignored the call of a lifetime.

The Grosvenor Teacher Fellowship (GTF) is a unique professional development opportunity for pre-kindergarten to Grade 12 educators from across North America made possible through a collaboration between Lindblad Expeditions and the National Geographic Society. Prospective candidates must complete a comprehensive application process before being considered. That phone call I unwittingly ignored was a congratulatory one. I had been chosen for a life-changing, field-based learning experience aboard the *National Geographic Resolution,* and I would be departing for Antarctica in November 2024.

Two months after that phone call, I was at the National Geographic headquarters in Washington, DC, for the pre-expedition workshop. Joining me were 34 additional GTFs who had also been selected to the 2024 cohort. Four of those educators were from Canada, with two being located here in Alberta. As luck would have it, Samantha Ur, a colleague of mine from the Global, Environmental and Outdoor Education Council (GEOEC), had also been selected. She would be traveling to Costa Rica and Panama a few weeks after I returned from my own expedition. In addition to Antarctica and Costa Rica, GTFs in our cohort would also be visiting Alaska, the Galapagos, Patagonia, Norway and Iceland, and England, Ireland and Scotland. The four-day workshop provided in-depth opportunities to learn about our roles as Teacher Fellows, the expectations around the program and what life on the ships would be like. We were able to gain valuable insight from GTF alumni, Lindblad's Naturalists and Nat Geo staff as we delved into the specifics of our first year as Teacher Fellows and the deliverables that would be required of us once we returned. It was also during this workshop that I first met Zac Sawhill, a high school teacher from Oak Harbor, Washington. The two of us would be roommates throughout our expedition and quickly became friends.

Perfect reflection in Recess Cove. Photo credit: Tyler Dixon.

Before I even knew it, I was standing in the Ushuaia harbour waiting to board the *Resolution*. The preceding months of planning, packing, preparing and promoting this expedition had rapidly disappeared. It had been a whirlwind 48 hours, including three separate flights, a stopover in Santiago, Chile, hiking in Tierra Del Fuego National Park, and a private catamaran tour down the Beagle Channel, all of which led to this moment of

embarkation. My excitement for what was to come barely quashed my nervousness. Before we could arrive in Antarctic waters, we first had to spend two-days crossing the notorious Drake Passage, home to some of the roughest seas on the planet.

Me on D'Hainaut Island with the Gentoo colony. Photo credit: Tyler Dixon.

As someone who is prone to seasickness, you could imagine my relief when the *Drake Passage* was more like Drake Lake during our southward journey. Half a day of feeling queasy was a small price to pay for the bucket list adventure that was about to unfold.

We spotted our first iceberg, a one-kilometre-squared slab of ice, floating near the South Shetland Islands. With camera shutters clicking away, trying to capture its enormity and uniqueness, we were blissfully unaware of the foreshadowing this '*berg* was casting over our expedition. It was the first iceberg many of us had ever seen, but it would be far from the last. The ensuing 11 days would feature icebergs of all shapes and sizes, from the tiniest *bergy bits* to the colossal A76C. Throughout this expedition, I continuously found myself drawn back to the magical splendor of the ice.

The colossal iceberg known as A76C. Photo credit: Tyler Dixon.

The US National Ice Center is the only organization that names and tracks all Antarctic icebergs. They will bestow names on only the largest, which have at least one side measuring a minimum of 19 kilometres in length. The pair of tabular icebergs we saw in the Weddell Sea—the A76C mentioned above, which calved from the Ronne–Filchner Ice Shelf in May 2021, and A80A, that broke off the Larsen Ice Shelf in November 2022—were separated by a small channel of sea water. Each one stands approximately 30 metres above sea level, and they both add up to 495 square kilometres of ice. It is exceedingly difficult to find the words to describe the immensity of these icebergs and, unfortunately, photographs don't do them justice.

An iceberg near the South Shetland Islands. Photo credit: Tyler Dixon.

Twilight in the Weddell Sea. Photo credit: Tyler Dixon.

The wildlife is just as unique and untamed as the Antarctic landscape. It is truly unbelievable that anything is able to scratch out a living in such a harsh environment, but life is thriving. Whether we were spotting seals resting on the ice or watching whales feasting in the water, megafauna was all around us.

Zodiac cruising through the Explorer Arch at Spert Island. Photo credit: Tyler Dixon.

The trumpeting and honking were audible from a significant distance away. The *Resolution* had stopped in Mikkelsen Harbour and the distinct sounds we could hear were from the nearby colony of Gentoo penguins on D'Hainaut Island. I was filled with anticipation as I patiently waited my turn to board the Zodiac boat for our first foray off the ship. Blocks of ice rested on the black sand shoreline as our Zodiac driver expertly navigated the shallow reefs before landing on the beach. There were penguins everywhere! Hiking past bleached whale bones, a testament to the area's extensive whaling history, I was in awe of the pageantry unfolding all around. Spring is nesting season and the Gentoos were busy building nests, a single pebble at a time, and squabbling over the best sites. Time was of the essence as the females would be laying their eggs very soon.

A Gentoo penguin on D'Hainaut Island. Photo credit: Tyler Dixon.

A Gentoo penguin on the fast ice in Charlotte Bay. Photo credit: Tyler Dixon.

In addition to our first visit at D'Hainaut Island, we also spent time with the Gentoos at Neko Harbour, Chinstraps at Baily Head and Adélies at Brown Bluff, who were already sitting on their eggs. The most impressive, however, were the Emperors at Snow Hill Island. The ice in the Weddell Sea was starting to break up but not enough for us to reach the northernmost colony of Emperor penguins in the world. Their rookery, located on the ice near Snow Hill Island's southern coast, was only discovered in the mid-1990s. Although we would not be able to see the Emperor chicks, the hope was to spot adults feeding along the ice edge. Luck was on our side again as we experienced the thrill of seeing Emperors up close during an off-ship trek over the fast ice. A pair of Emperors emerged through a hole in the ice and waddled right toward us. The only sound was that of our cameras snapping away as we relished this remarkable occurrence.

Gentoo penguin trumpeting at Neko Harbour.
Photo credit: Tyler Dixon.

Two Adélie penguins perched on the fast ice at sunset.
Photo credit: Tyler Dixon.

Watching Adélie penguins at Brown Bluff.
Photo credit: Tyler Dixon.

An Emperor penguin near Snow Hill Island.
Photo credit: Tyler Dixon.

Out of all the wildlife encounters we witnessed, one in particular stands out. When you're traveling with National Geographic, you are bound to have one of those *Nat Geo moments*. Ours came in the Gerlache Strait as we were heading south toward the Lemaire Channel. We spotted a pod of Orcas in the distance. Everyone rushed to the bow to watch them frolic and breach right in front of us. Then the unimaginable happened. We noticed a lone penguin swimming near the pod. It did not take long for the whales to notice it too, and then, the hunt was on. An adult reached the helpless penguin first and flung it into the air. Stunned, the penguin lay motionless in the cold water before becoming airborne once again. And they say *penguins can't fly*. This continued several times before the bird was eventually consumed. Although this behaviour appeared to us as the whales playing with their food,

An iceberg in the Gerlache Strait. Photo credit: Tyler Dixon.

Una Peaks guard the northern entrance to the Lemaire Channel. Photo credit: Tyler Dixon.

the Naturalists on-board theorized that they were teaching their calf how to successfully hunt.

For all its wild beauty, Antarctica has a murky past. The abandoned, rusting relics from a dark chapter in Antarctica's history are on full display at Whalers Bay inside the flooded caldera of Deception Island. In the early 19th century, Norway's Hektor Whaling Company established a whaling station. To satisfy the growing appetite for whale oil, which was mainly needed to power lamps, more than a million whales were slaughtered in these southern waters. As the cost of whale oil plummeted in the years following World War I, the company faced financial difficulty and ultimately closed this station in 1931. Thirteen years later, the British military established Base B among the remains of Hektor Station, where they conducted meteorological and geographical research until 1969, when much of the base was destroyed by a volcanic eruption. These haunting remains, visible from the outer decks of our ship, provided a stark contrast to the striking beauty we had witnessed throughout the rest of our trip.

Remains of the Hektor Whaling Station on Deception Island. Photo credit: Tyler Dixon.

Whether we were plying the glassy water on kayaks, gliding across the sea ice on cross-country skis, plunging into the frigid water during the Polar Plunge, taking our first steps on the Antarctic continent, learning from the experts on-board the ship, snapping thousands of photos, enjoying five-star cuisine or socializing with the other guests, there was never a dull moment throughout the entire expedition. Zac and I said many times how incredible each day was and then laughed incredulously when the next day somehow outdid the previous one. This opportunity exceeded my expectations in every way imaginable.

The long journey home started way too soon for me. Two more days crossing the Drake northward, although this time we experienced the *Drake Shake*, and three additional flights within a 48-hour period, before I safely landed in Calgary. I was utterly exhausted but in the best way possible. All that transit gave me plenty of time to process the life-changing journey I had just experienced. I started to brainstorm ideas about how to make this expedition real for my students when I returned to the classroom.

The United Nations (UN) declared 2025 as the International Year of Glaciers' Preservation. Glaciers regulate our climate on a global scale and are a source of essential freshwater for people around the planet. However, glaciers are rapidly shrinking due to the effects of climate change. The UN wants to highlight their importance while raising awareness about the critical role glaciers play in the hydrologic cycle and the impending changes to Earth's cryosphere. I look forward to making important connections between Antarctic glaciers, located in one of the most rapidly warming places on the planet, and the receding glaciers in our backyard of Alberta's Rocky Mountains.

I would like to take this opportunity to thank the National Geographic Society and Lindblad Expeditions for including me in the 2024 Grosvenor Teacher Fellow cohort and providing me the opportunity of a lifetime. This expedition will have profound outcomes in both my personal and professional life.

To learn more about the Grosvenor Teacher Fellowship program and my own Antarctic expedition, please visit https://linktr.ee/tcdixon3.gtf2024.

From Fire to Ice to Fossils: Learning in the Stanley Glacier Basin

Tyler Dixon

Hiking into the Stanley Glacier Basin with a group of Grade 8 students feels a bit like stepping into a living science textbook, only the pages are made of towering cliffs, braided streams and an amphitheatre carved by ancient ice. The trail winds steadily upward through a landscape shaped by both fire and ice, offering a perfect firsthand lesson in how dynamic mountain environments can be. As students trekked past old burn zones and into the narrowing valley, they could see how new vegetation takes root, how glaciers sculpted the landscape and how water carries sediment from the melting ice above. By the time the basin opens up before them, they are standing in a classroom built by geologic time itself.

How we found ourselves in the Stanley Glacier Basin is a bit of a longer story. When I was selected as a Grosvenor Teacher Fellow by National Geographic and Lindblad Expeditions (please see "My Journey to Antarctica" on page 32 for more information about my Antarctic expedition), I was required to submit deliverables upon my return. One of those deliverables was a student-facing project where I could link what I learned in Antarctica with the students in my classroom. I landed on the topic of glacial ice. Canada accounts for approximately 20 per cent of the world's total glacier volume, which makes us the most glacier-rich country globally in terms of nonpolar ice.

However, our glaciers are retreating at an alarming rate, with some predictions stating glaciers in the

Canadian Rockies stand to lose more than 90 per cent of their volume by the year 2100. Armed with those alarming statistics, I set about creating a unit on glaciers and their important role in Earth's cryosphere. The culmination of that project was a pilot program in collaboration with Parks Canada that would see my students trekking into Stanley Glacier Basin while learning from Parks Canada interpretive guides. This was a unique opportunity provided to my students with the hope of opening up Parks Canada programming to more schools in the future.

Stanley Glacier, though much smaller than it once was, sits recessed high in its cirque, which provides an ideal opportunity to talk about glaciology in real life. Here, students could examine glacial moraines, observe how meltwater shapes the creek below and see the stark boundaries between ice, rock and living ecosystems. These features helped them understand concepts like glacial retreat, erosion and climate change in a tangible, memorable way. The basin provided a rare chance to connect textbook terms with actual landforms they could touch and explore in a safe, controlled manner. Along the way, students could easily see how glacial movement sculpted the land. Polished rock surfaces, deep U-shaped valleys and towering cliffs all testify to the glacier's immense power over thousands of years. Pausing at various viewpoints gave us the perfect opportunity to learn how glaciers form, advance and retreat, and how they continue to reshape the environment even today.

But the adventure did not end with ice. The cliffs surrounding Stanley Glacier are part of the renowned Burgess Shale fossil ecosystem, one of the most important paleontological sites in the world. Students quickly grasped that the rocks around them once formed the floor of an ancient ocean more than 500 million years ago. With guidance from interpretive staff, students were able to search for small trace fossils in loose scree and imagine the soft-bodied creatures, such as trilobites and early arthropods, that once thrived there. Overturning countless rocks turned into a scavenger hunt of sorts to see who could discover a 500-million-year-old fossil that may have never been seen before by human eyes. We discovered how these fossils formed, why they are so scientifically important and what they reveal about the explosion of complex life during the Cambrian period. Imagining the once-thriving seafloor that existed where mountains now stand gave the hike an almost time-traveling quality. This intersection of adventure and deep time turned the hike into something more than a field trip: it became a chance to witness Earth's history stacked in layers all around them.

The return hike became a conversation about what students had seen along the way. Topics such as how fire reshapes a forest, how ice carves a valley and how ancient fossils can still be found on mountain slopes were popular discussion points. For this group of Grade 8 students, the Stanley Glacier Basin offered the perfect blend of challenge, discovery and wonder, turning a single day outdoors into an unforgettable journey across millions of years. We returned with a deeper understanding of Earth's history, one told by ice and stone, fire and ancient seas, and with memories of an adventure that connected us to the natural world in a way no classroom lecture ever could.

I am happy to report that after we returned, officials from Parks Canada and the Calgary Board of Education opened up their guided hiking programs to additional school groups. For additional information about all guided hikes in the mountain national parks, please visit https://parks.canada.ca/pn-np/bc/yoho/activ/guidee-conservation-guided.

Going Away to Get Closer to Home

Colleen Kiselyk

I had the privilege of teaching a junior high Career and Technology Foundations option—Outdoor Education—for several years. Two years ago, I was able to work with 28 students from Grades 6 to 9, many of whom had been my students since kindergarten. I applied for and received an Access to Action Grant from Sport Canada, and we decided to do a three-day, two-night canoe trip with the group of students as a culminating activity.

In preparation for the trip and to deepen their experience, we prepared and dehydrated our meals in advance, learned and practiced a variety of knot and tarp skills, canoe skills and setting up tents, and began a journal assignment based on Robin Wall Kimmerer's book *Braiding Sweetgrass*. The intent was to introduce the Indigenous way of interacting with the Land and to deepen our connections with the Land in our community and our home. I would select a chapter or portion of a chapter from the book and read it out loud to the students. Then, we would have a class discussion. I would select a question or topic based on the reading for the students to respond to in their journals. I would respond individually to each entry with further questions or comments to provoke deeper reflection. Some students performed this task perfunctorily, but most took it seriously and began to reveal deep insights, share their fears about our trip (many had never been camping, never mind canoeing) and open their hearts to the learning that was taking place.

For our canoe trip, I had each of the students pack their journal and bring it along. We took time each day to reflect and write about specific parts of our experience. On the evening of the second day, we had campfire time, where we sang and played some fun games. We laughed together and shared the joy of being in this beautiful space together with people that we had grown up with and were growing closer to. As the sun began to set on the lake and the call of the loon was the only sound to disturb the silence, I read the chapter in *Braiding Sweetgrass* on the Thanksgiving Address. After reading each section, I would pause, the quiet would descend, and the presence of the place would envelope us. I added my own thanks to each child for their presence in my life over the past several years, and we went off to bed solemnly, with grateful hearts. As we settled in to sleep that night,

you could hear gentle calls from one child to another, one tent to another, thanking each other for being a part of their lives.

The next morning dawned with the shared sense of gratitude still lingering over the camp. As breakfast was made, dishes done and gear taken down to be loaded back into our canoes for the journey home, the gratitude continued.

As a wrap-up to the activity, we had an Indigenous Knowledge Keeper come into our class. She spoke to us about living in harmony with the Land, to be responsible for and respectful to "Mother"—both the flesh and blood members in our families and Mother Earth—who sustains us. The students' final assignment was to write in their journal about the past three months and the impact it had on them. The responses made me laugh, cry and smile with deep gratitude for the way they were coming home—to the Land, to their place on the Land, to themselves.

I have had the privilege of leading many groups of students on canoe trips, yet I have never witnessed the profound impact that the experience can have on participants as I did with this group. Perhaps it was the fact that I knew these students so well. Perhaps it was the extra time I had with them in the months before and after the trip. Perhaps it was the added impact of Kimmerer's book and the Knowledge Keeper's teaching. Or perhaps it was just that on this journey away we all came a bit closer to home.

Tropical Trails: A Grosvenor Teacher Fellowship Experience

Samantha Ur

I will never forget listening to that voicemail on a cold February afternoon. I had been teaching all day and received a notification at 1:30 PM that someone had left me a voicemail. I did not think much of it because of all the spam calls I had been getting lately.

Around 4 PM, I was sitting in my truck, getting ready to leave, when I suddenly thought to check the voicemail. It was from Angela at Lindblad Expeditions and National Geographic. I was accepted as a Grosvenor Teacher Fellow, and I would be visiting Panama and Costa Rica in December.

I had been dreaming of this for a few years. I had talked to previous fellows, Paula Huddy-Zubowski, Andrea Smola and Alison Katzko, and was incredibly interested in this fellowship. I had been applying for a few years, hoping to receive this phone call. The Grosvenor Teacher Fellowship is a professional development opportunity for educators from Canada and the United States. This fellowship enables educators to embark on a voyage to different destinations around the world. This expedition provides hands-on, field-based educational opportunities that we can use to inform our curriculum and inspire students. In 2024, the 16th cohort of Grosvenor Teacher Fellows was announced. Thirty-five educators were selected out of hundreds of applicants. I was chosen as one of four Canadians among this incredible group.

In April 2024, I visited Washington, DC, to learn more about the program, meet the rest of the cohort and my cabin mate Taylor from Georgia, and learn from naturalists, professionals and former Grosvenor Teacher Fellows.

In December 2024, I took off for Panama. The first stop on the expedition was the Panama Canal. The *National Geographic Quest* was waiting for us in Colón. We boarded, found our cabins and quickly made our way back to the bow of the ship. Our first stop was the Panama Canal.

The Panama Canal was completed in 1914 by the United States. The French first proposed and began the project. They wanted to find a way to get their ships to the other side of the Americas without having to go all the way around South America. They debated and eventually settled on going through Panama. The original idea was to make the canal sea level the whole way, but it turned out to be too difficult. The French could not continue the project, and the United States picked it up. The engineers decided to use a lock system instead of trying to make the whole canal sea level. They built three locks on the Caribbean side of the canal, dammed the Chagres River to make Gatun Lake (which was, at the time, the largest artificial lake) and built three more locks on the Pacific side.[1]

In 1999, the United States signed a document with Panama, giving Panama exclusive control of the canal, with the caveat that any US government boat can skip the line to go through.

In order to travel the Panama Canal, all vessels need a *pilot*. These people take navigational control of any vessel going through the canal. Once our pilot was on board, we set off to traverse the canal.

We went through the original locks that were completed. In 2016, Panama had added a newer lock system beside the original one to allow larger vessels to navigate through. Our ship was small enough that we could use the original lock system while sharing each lock with a cargo ship, the *Etigas*. The water in each lock comes from Gatun Lake and raises 87 feet in each of the three locks we traveled through on the first night.

Me with the Etigas. Photo credit: Samantha Ur.

We spent the night on Gatun Lake. This lake is incredible as all the islands were once the tops of mountains. As the lake was made, they flooded the area and only the top of their hills peaked above the waterline.

We visited Barro Colorado Island. This island is home to the Smithsonian Tropical Research Institute. Hundreds of scientists visit the institute and Barro Colorado Island for research and study. One intriguing study they shared was their greenhouse and climate change project. They have two greenhouses with the same plants in each. One greenhouse is kept at the normal temperature of the island, and the other one is kept at a constant four degrees higher than normal. The scientists are studying what happens to plants during all their life stages when the temperature is raised.

Greenhouses. Photo credit: Samantha Ur.

Once we had another pilot on board, we were allowed to continue our traverse of the Panama Canal. We had three locks to bring us back down to the level of the Pacific Ocean. Because the pilot was not able to come aboard until the evening, we traversed the last locks in the early hours of the morning, so I unfortunately missed it.

The next morning, the waves allowed us to visit Isla Iguana. This island was once used by the United States during the two world wars as bombing target practice. They eventually stopped, and the island became a wildlife refuge. As late as 2018, undetonated bombs were still being found on the island.

On our hike, we saw many craters from the bombing practice. But the wildlife has been rebuilding. We were surrounded by frigatebirds putting on their mating displays. The males used their large red sacs and a clicking sound from their beaks as a display for the females who were circling above.

A male frigate bird. Photo credit: Samantha Ur.

At the beach, we snorkeled around a coral reef just off the shore. This reef was not what we were expecting. There were a variety of fish but not as much coral as we expected. The naturalists explained that this coral is in recovery. The bombing severely impacted the reef and destroyed a lot of it. Now, the reef is slowly rebuilding itself.

Early the next morning, I headed to the bow of the ship. I was able to watch a pod of seven dolphins bow riding. The bow of the ship creates a current as it moves through the water, and the dolphins like to play in it. The sunrise was magical as it peaked golden over the horizon.

Golden sunrise. Photo credit: Samantha Ur.

On this day, we had two destinations. The first stop was Cocos Islet. Once we reached the beach of this small island, we donned our snorkeling gear and headed for a small rocky outcrop. This small island and the surrounding islands are part of the UNESCO World Heritage Coiba National Park and its marine reserve. Due to this designation, the coral reef here was alive. This marine corridor is the same as the Galapagos. Among the marine life we observed were moray eels, two white-tipped reef sharks, a hawksbill turtle, sergeant fish, puffer fish, surgeonfish, parrot fist, angel fish and many others. Seeing such a vibrant underwater ecosystem was truly remarkable.

In the afternoon, we visited the ranger station at Coiba Island, which is the largest island in Central America. This island was a penal colony from 1919 to 2004. Because of that, most of the island has remained largely untouched and has many endemic species. We took a small hike around to see what we could find (I saw my first white-faced capuchin monkey!) and spent time exploring the bay by kayak or stand-up paddleboard. While on the paddleboard, I saw a spotted eagle ray. This day was truly a biological marvel.

View of the ship from the lookout. Photo credit: Samantha Ur.

By the next day, we had sailed into Costa Rica. We started in Golfo Dulce where we kayaked to a mangrove forest. Mangroves are incredibly important in preventing soil erosion. However, they are not immune to flooding and will drown if they are underwater too much.

We had a small session on-board our expedition ship about the history of Costa Rica. In the 1800s, Costa Rica mainly exported coffee thanks to the Spanish. Then, it evolved to include sugarcane and bananas. During the two world wars however, their economy was devastated because of the halt in the exportation of *desserts*. After a period of political instability, the people of Costa Rica gained social warranties (such as minimum wage and union rights). The government also decided to abolish their army and, instead, put that money toward free public education through Grade 6.

In the afternoon, we hiked around a rainforest owned by a local family in Rio Seco. On this hike, I saw scarlet macaws, many leaf cutter ants, army ants and squirrel monkeys. We also saw a few tree species that grow in the rainforest. Here, banana trees fail as they cannot outcompete the native plants. *Hura crepitans* is a tree that has sharp spikes and sap that causes swelling. Another tree that was very common was a *walking palm*. This is a palm tree that sends out new

roots to replace the old roots and can move 20–50 centimetres in its lifetime. Did you also know that trees in the rainforest do not have rings? Because of their constant growing season, they do not have age rings like we see in trees in Alberta. The only way to know how old they are is by watching them grow. This fact was astonishing to me. Never in my life had I questioned the fact that all trees have age rings. Now, I know that is not always true and have made sure my students are aware of this fact.

Leaf cutter ants. Photo credit: Samantha Ur.

Tree trunk with no tree rings. Photo credit: Samantha Ur.

Our next day brought us to Playa Blanca for a day with the local community. As soon as we landed on the beach, we were welcomed by a Hoffman two-toed sloth.

First up was a tour of the Gold Tour de Oro. Juan and his father before him had used their land to pan for gold for a living. Now, he does tours of panning for gold and makes enough to support his family for the year. During this tour, we learned about gold panning

Walking palm. Photo credit: Samantha Ur.

A sloth. Photo credit: Samantha Ur.

and its effects on the surrounding landscape, then we panned for gold. We found a gold nugget worth approximately $100 and a few flakes on the side. Now, Juan and his family work to protect the flora and fauna found on their land and do tours of gold panning instead of destroying his homeland.

A gold nugget. Photo credit: Samantha Ur.

Next, we visited Johnny and his family at Trapiche de Don Carmen to learn about sugarcane milling. They showed us how they use a sugar cane press to squeeze the juice from the cane (it is hard work!), how they boil it and create candy bricks from it to sell to the local community. Because of the tours, they were able to buy the sugarcane press that has helped his family immensely. This tour was delicious!

Melting sugarcane. Photo credit: Samantha Ur.

For lunch, we returned to the beach and were greeted by a local group of children performing Costa Rican traditional dances. They were a wonder to behold. Their traditional clothing was bright, vibrant and moved with incredible grace.

A Heart of Palm plantation was next on the list. A family of women own and run this farm. If you have never tried a fresh heart of palm, you should—it is delicious. It has now made canned heart of palm unappealing to me. The palm is full of dangers, including 10-centimetre-long spikes that you have to cut away with a machete, pit vipers that can hide in the fronds and wasps making their homes in them—this is not for the faint of heart! It is a lot of work to get to the heart of palm, but it has been a staple food in Latin America for many years.

Back at the beach, we had a visit from the Latin American Sea Turtles (LAST) Association. This nonprofit organization rescues and rehabilitates sea turtles from both coasts of Costa Rica and protects nesting and foraging sites. They walked us through their scientific process and what they do when they catch a sea turtle (every measurement is taken three times and averaged). They also shared with us the story of the juvenile female hawksbill turtle they had brought with them to release. Five of the seven types of sea turtles can be found in Costa Rica. About 50 per cent of the turtles that LAST checks have ingested plastic. LAST has over 80 nesting projects around the coast and five foraging protection projects right now. Did you know that the higher the temperature is, the more female turtles there are? Releasing this turtle into the ocean was a bucket list item for me, and I am sure my students will be very excited to hear about this.

A sea turtle. Photo credit: Samantha Ur.

The next day, we had local Zodiac drivers from Drake to help us navigate the turquoise waters of Rio Agujitas. This beautiful river is only navigable at high tide, and we saw many different birds, reptiles and monkeys.

A bird in Rio Agujitas. Photo credit: Samantha Ur.

In the afternoon, we went on a hike that turned out to be my favourite in the entire expedition. We arrived in Punta Caletas private reserve to hike near Corcovado National Park. There were only five of us on this hike, so we were quiet enough to see a few incredible creatures. We first encountered a yellow-throated toucan looking for tree nuts to eat. I was enthralled with the way it was moving its whole head to search the tree branches, assuming it could not see past its beak any other way. Further in, we saw a red-capped manakin (a very small, cute bird) that did its moonwalking mating dance for us. If you have never seen this spectacle, go look it up. To see this in person was spectacular. Later, we saw a howler monkey troop in the canopy. We watched them walk across the *monkey ladder* vines, poop, and one even sat in a tree and watched us.

A howler monkey. Photo credit: Samantha Ur.

Shortly after that, we spotted a spider monkey, with a young one, walking in the opposite direction of the howler monkeys. Our naturalist, Fico, was able to identify her as she was hiding from us in the canopy.

This was our last day on the expedition. I will admit, I almost cried twice on this rainforest hike. I felt incredibly grateful for being in a place I have only ever dreamed of and seeing flora and fauna I have only ever seen in zoos (blue morpho butterflies were everywhere!). I was overwhelmed with the experience that I was going to be able to bring back to my students.

During my time, I wrote more than 35 pages of notes in a journal to share with my students. I also collected over 1,000 pictures and 30 videos to show my students. My heart is full knowing I am the explorer I hope my students see in themselves. I have many ideas about how to bring this experience to my students, but for now, I am digesting all that I have experienced. I am still full of gratitude for being selected as a Grosvenor Teacher Fellow.

Backpack on the beach. Photo credit: Samantha Ur.

This is truly a life-changing experience for educators, students and communities. If you are interested in learning more and applying to become a Grosvenor Teacher Fellow, visit www.nationalgeographic.org/society/learn/for-educators/grosvenor-teacher-fellows/.

You can also read my blog for this adventure at https://storymaps.arcgis.com/stories/6557a88e87af49ab988ca5e9e0a9f2a4.

Notes

1. If you want to read more about how the Panama Canal was built, the book *The Path Between the Seas: The Creation of the Panama Canal*, 1870–1914, by David McCullough (Simon and Schuster, 1977) is very informative.

Wild Jobs: Outdoor Educator

Tyler Dixon

"Teaching outside the box means taking education beyond classroom walls and into the wonders of the world."

— Unknown

I first met Court Rustemeyer back in the autumn of 2016 at the Alpine Club of Canada's Canmore Clubhouse; a fitting location considering the outdoors would become the foundation of our friendship. At that time, Court was the newest executive member of the Global, Environmental and Outdoor Education Council (GEOEC), a specialist council of the Alberta Teachers' Association (ATA). We were immersed in our annual fall retreat, trying to plan various professional development events for teachers that we'd be hosting throughout the upcoming school year. That weekend was a bit disjointed, and I, who had been part of this council for nearly two years, remember being overwhelmed by the tumultuous state of things. With that being Court's first experience with GEOEC, I could only imagine what he was thinking. If there were any feelings of contrition, he didn't show them and not only did he stick it out that weekend, but he also eventually became president.

The subject of this story somewhere on the west coast. Photo courtesy of Court Rustemeyer.

I think our initial meeting all those years ago is a fitting snapshot of who Court is. A man who sees the big picture, isn't afraid to stick it out when things get messy and is dedicated to helping those around him. Court has been a teacher with the Calgary Board of Education (CBE) for 16 years now, and those aforementioned traits (among others) are also what make him an outstanding educator. I wanted to highlight an outdoor educator in this column, and I think Court was the perfect individual to be featured. So, without further ado, let's take a look inside Court's outdoorsy classroom.

Doing what he does best: getting students outside. Photo courtesy of Court Rustemeyer.

Tyler Dixon (TD): You grew up in Prince George, so what brought you to Alberta?

Court Rustemeyer (CR): I moved to Lethbridge for university many years ago, where I completed my BA. I moved to Calgary for the education program at the University of Calgary. After graduating with a BEd, I decided that I would teach for a couple of years before going back home. Here I am 16 years later and loving it! I guess you could say Calgary is my home now.

TD: In addition to your education degree, what other types of training/certifications do you have that are essential for your job?

CR: As an outdoor educator, I feel like we wear many different hats throughout the course of the day.

There are definitely training and certificates that have helped guide my work. Wilderness First Aid (WFA) is huge for the obvious reasons of keeping not only my students, colleagues and volunteers safe, but also myself. WFA is also one of those certifications required by the CBE to take students off campus. I have been very lucky to work with the Outdoor Council of Canada (OCC) as an executive on the board. In addition to being a board member with the OCC, I am a certified field leader instructor and an instructor examiner, allowing myself the opportunities to train other outdoor enthusiasts wishing to lead programming with their groups. While I never take students into any avalanche terrain, having my Avalanche Skills Training (AST) Level 1 is huge in terms of knowledge for instructing my students on the do's and don'ts in the backcountry. This helps during trip planning and providing my students with an intro to safe training for the outdoors.

The activities change with the seasons, but the learning stays outside. Photo courtesy of Court Rustemeyer.

TD: What is the best thing about your job?

CR: I can honestly say working with youth. Yes, we have days when students make our lives interesting and challenging, but overall, it is such a rewarding feeling working with students that are passionate about their futures. I feel even more fortunate that I get to explore this world with my students on a daily basis and watch as their lens and perspective on nature shifts. The growth seen in an outdoor education classroom is incredible and something that doesn't always happen in regular core curriculum classes.

Watching as students learn to cook, camp, pack their bags and become independent yet, at the same time, being so reliant on a team. All of these things will never be found in a *normal classroom*. Above all, throughout these adventures we take with our students, the biggest takeaway is the growth in the students, and their levels of self-advocacy, empathy, empowerment, determination and hard work go through the roof. It really is something to marvel at, and I know it's special.

TD: What's one of the biggest challenges in your chosen career?

CR: This job can definitely be added in hours for all the extra off-site activities and planning. It is always that fine balance of doing your job with complete planning, including paperwork and booking reservations, time for recons, gear checks, extra meetings with students/families outside of classroom hours, post-trip reports etc. All the while knowing that this is extra on top of your day-to-day classroom teaching. So, it can be quite challenging to juggle everything and find balance not only at work but at home too. Our landscape as educators is always changing as well. Whether that is politics, restrictions, student populations or funding … all of which require educators to be flexible, fluid and understanding to an ever-shifting world.

Sunset views on his annual west coast backpacking trip. Photo courtesy of Court Rustemeyer.

TD: What's your favourite thing to teach and why?

CR: I teach a variety of classes at the junior high level (Grades 7–9), including physical education, leadership, and outdoor education. Outdoor education 7 is one of

my favourite classes to teach because of the new ideas that Grade 7s brings to the classroom. They are energetic and excited for new opportunities in the *big school*. For many of these students, it is the first time they have been exposed to an outdoor classroom and the first time they have ever tried bigger activities like rock climbing, hiking or snowshoeing.

TD: I know you host a variety, but what is your favourite field trip to run and why?

CR: It is tough to pick a favourite field trip with everything that we do, but it is tough not to say our eleven days on the west coast of Canada. Starting in September all the way until the end of May, this is a trip that the students work extremely hard for. The preparation includes multiple skill and simulation camps that the students take part in to learn the hard skills necessary for a trip of this nature. Students take part in meetings throughout the entire school year to do team building, extra projects and planning before they get to go backpacking along the rugged west coast. For the trip itself, the students carry all of their own gear and plan and cook all of their own meals. It is truly a student-led adventure. This is not only a highlight for me but a life changing trip for the students.

Winter adventures in the Canadian Rockies. Photo courtesy of Court Rustemeyer.

TD: In addition to teaching, you also run an outdoor leadership club. Can you talk a little bit about how that got started and what it looks like?

CR: I have been very fortunate to have some incredible peers and mentors in my life as an educator. When I started teaching at Vincent Massey School, there was an excellent outdoor education program already in place. I knew that when I took over full-time, I would have to make it my own and do things that worked best for me. What I started noticing is that all of the students who took outdoor education as a class were hungry for something more, and I could tell that they needed something to help showcase just how amazing they are and the growth they were experiencing. What first came to mind was creating a year-end trip and figuring out how I could get them there. Once I had that in place, I tried to determine the best times in a busy school year where I could host our mini-camps or training days.

I moved the outdoor leadership meetings before school, and I noticed a huge increase in student engagement, empowerment and volunteerism. By having this club and something extra for the students, I started seeing students who genuinely wanted to be there and wanted to make a difference in their programming. I could hold them accountable for being a member of a team and have different expectations than in my typical classroom.

By having more time with the students before these larger trips, I discovered that I knew the students and families more in depth than in a regular class. My level of confidence leading this group of students outdoors for multiple days increased dramatically because we had that much more time together. The students' level of mastery of hard skills for camping and backcountry exploring became stronger and, finally, they got a chance to be showcased more than a typical option class ever could in a regular semester.

As of today, we have different outdoor leadership (ODL) clubs for Grades 7–9. The Grade 8s build towards that huge west coast adventure all year long with many extra trips along the way. In Grade 9, we look to build on that capacity by adding survival camps and winter backcountry camping, snow caving, bike trips and more! A huge component of the Grade 9 ODL classes is also running the Grade 7 club. They plan, implement and deliver camps for the Grade 7s, showcasing a full circle of their leadership journey. The Grade 9s are also heavily involved in volunteering for school programs and presentations.

TD: In addition to teaching, you are also the president of GEOEC. How does your work there contribute to your role as an educator?

CR: I am extremely lucky to be an executive with GEOEC. One of the best career decisions I have ever

Taking it all in. Photo courtesy of Court Rustemeyer.

made is to volunteer for this council. The team that makes up GEOEC is one of the most hard-working, inspirational and supportive groups I have ever been a part of. Before GEOEC, I always had an interest in professional development opportunities, educational workshops and conferences, but I don't know if I ever saw myself leading, organizing and facilitating these same opportunities for educators across Alberta and Canada. The connections made through the ATA and GEOEC with other educators, professionals and service providers in our industry are unimaginable. The level of information, resources and experience that I have learned to bring back to my own classroom is something that I will always be thankful for. I have had the pleasure of meeting some amazing individuals in the teaching world who have had a huge impact on shaping my own teaching philosophy today. I wish that teachers knew the opportunities they have access to in our profession, and I truly believe that it's a driving force behind my work with GEOEC to help support educators with their students.

Best buds, Lucy and Court. Photo courtesy of Court Rustemeyer.

TD: Anything else you'd like to add here that would provide context/understanding about your job?

CR: As an educator, I feel like I have the unique privilege of working with youth and having a direct impact on their futures. This is of course a profound responsibility and opportunity. Every single day I get to witness their growth, curiosity and potential first-hand. It is not always easy to impart knowledge and instill values in our youth all while fostering creativity and nurturing confidence. Each new day presents unique challenges and triumphs, yet this fosters a sense of fulfilment. Knowing that our impact can extend far beyond the classroom and influencing generations to come is a strong statement and one I do not take lightly and take to heart. I love the fact that I can help show youth the trails they may want to walk in life and guide them to walk those paths with their own two feet in the direction of their dreams.

Court's annual ice caving trip in the Canadian Rockies. Photo courtesy of Court Rustemeyer.

I want to take the time to sincerely thank Court for thoroughly answering all of my questions. He provided depth and clarity to give us all an inside look at what it's like to be an outdoor educator, all while preparing for his annual trip to the west coast.

If you want to stay up to date with everything that's going on in Court's outdoor education world, you can follow along on all of his adventures on Instagram (www.instagram.com/masseyodl/).

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Exploring Literacy and Numeracy Outdoors: Practical Strategies Aligned with the Alberta Math and English Language Arts and Literature Curricula (K–6)

Wanda Dechant and Kim Tackaberry

For educators already embracing outdoor learning, the challenge is often not why but how. How can we make outdoor literacy and numeracy experiences rich, connected and meaningful? How can we support engagement over time with texts and mathematical thinking? In our recent professional learning sessions, "Exploring Literacy and Numeracy Outdoors: A Multisensory Adventure," we focused on providing teachers with practical strategies they can immediately use in their classrooms that go beyond one-off experiences to create sustained, thinking experiences in nature.

Anchoring Learning in Literature

A key component of our approach is starting with a carefully selected piece of literature, often a beautifully illustrated picture book for the younger grades or a knowledge-rich text, that we revisit multiple times throughout different outdoor activities. This deepens students' engagement with the text and allows them to explore it from different perspectives: through accountable talk stems, hands-on math connections and writing tasks.

For Grades K–2, we used *Over and Under the Snow* by Kate Messner (read aloud), which invites students to explore winter habitats. For Grades 3–6, we used *The Wisdom of Trees* by Lita Judge, which blends poetry, science and storytelling to reveal the interconnected world of forests.

Practical Activities You Can Use Right Away

For K–2: Building Language and Number Sense Outdoors

- Traverse Talk: Take students outside and gather around a tree. Read the book's opening pages aloud, then use accountable talk stems (eg, I wonder…, I agree because…, Can you say more about that?) to spark reciprocal conversation. Printable talks stems from School 21 Talk Moves can be found at https://drive.google.com/drive/folders/1QwqWMKeVURvVSooLSewOUQQZjeKBSTDn. (Note: The print version is meant for the teacher; students should first observe the teacher modelling the selected stems multiple times prior to participating in a Traverse Talk themselves.)
- Size Comparisons in Nature (Who is Bigger?): Provide students with yarn cut to the lengths of different animals (eg, vole, rabbit, bear). Ask them to find natural objects that match those lengths and compare sizes. Can they put them in order from smallest to largest?
- Winter Words and Word Work: As students explore, they collect and record words related to the season. Use a decoding and encoding process, like a word ladder, to connect forest vocabulary with spelling and morphology.

- Going on a Shape Walk: Provide students with transparent shape and encourage them to look through them as they walk outside, searching for matching shapes in nature. Afterward, revisit Messner's book and discuss any shapes found in the illustrations or inferred from the text. This helps connect visual literacy with mathematical thinking. (Additional walk ideas can be found at www.educationthatinspires.ca/2016/01/25/a-walking-curriculum-supporting-learning-through-focused-walking-k-12/).
- Writing to the Wild: Students write a letter to an animal from the book. What would they ask a fox or a hare about winter survival? Younger students' letters can be in the form of a picture drawn by them that they then share with a classmate.

For Grades 3–6: Inquiry-Based Math and Literacy in Nature

- Tree Talk and Traverse Discussions: After showing the cover of the book, *The Wisdom of Trees*, invite students to look around and identify what they see outdoors that matches what they see on the cover. Students pair up and use Accountable Talk to respond to a prompt: *Are trees or grass more important?* (The prompt is a statement or question that can have multiple responses). They move between partners to gain multiple perspectives.
- Measuring Big Ideas (20,000 sq ft): Students estimate, pace and measure out 20,000 square feet (the surface area of a tree's leaves—connected to the anchor text). Use meter sticks and tape measures to visualize the scale, then connect this to multiplication, area and scale models.
- Morphology in the Wild: Using tree trunks as a metaphor, students break down words like *coniferous* and *deciduous* into roots, prefixes and suffixes. Try an interactive morphology tool like Morpheme Mapper (at https://phonicsandstuff.com/morpheme-mapper).
- Going on an Angle Walk: Provide students with transparencies of angles and line segments, challenging them to find real-life examples in nature. Afterward, discuss the angles and lines observed in trees, branches and other outdoor structures, making connections to geometric concepts.
- Writing and Math Reflections: At the end of the session, students return to their tree and write a final reflection or a math-based inquiry (eg, If a maple tree has 20,000 square feet of leaves, what could that cover in your neighbourhood?).

Bringing It Back to Your Classroom

Here's how you can bring outdoor learning into your classroom:

- Start with a strong book: Choose a book with depth that connects to both literacy and numeracy. Read it multiple times, each time focusing on a different perspective or skill.
- Use the outdoors as your classroom: Find a tree, a playground or even a patch of grass. Simple settings can spark deep thinking.
- Structure discussions with accountable talk: Provide students with discussion prompts and sentence stems as a structured way to build their capacity to agree or disagree with their classmates in a safe environment.
- Integrate movement-based math: Ask students to estimate, measure and compare real-world objects.
- Encourage student-driven inquiry: Let students generate their own questions and think critically about their learning through outdoor connection and hands-on activities.

Let's Keep the Conversation Going

We are constantly seeking ways to improve and build on these outdoor literacy and numeracy lessons. What outdoor literacy and numeracy learning experiences have been successful for you and your students? In which curriculum areas are you seeking new outdoor ideas that are rich, connected and meaningful?

Reach out and share your thoughts with us!

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Featured Resources

Exploring Nature's Classroom: A Hike Through Elk Island National Park

Court Rustemeyer

Alberta is a province brimming with natural beauty, and while the grandeur of the Rockies often steals the spotlight, the Edmonton area offers its own hidden gems that are perfect for outdoor education. One such treasure is Elk Island National Park, a mere 45-minute drive east of the city.

Elk Island National Park is a protected natural area known for its diverse wildlife, rich history and stunning landscapes. As Canada's only fully enclosed national park, it plays a crucial role in bison conservation and is home to a variety of species, including elk, moose, beavers and over 250 species of birds. The park's tranquil trails, rolling aspen forests and shimmering wetlands provide an ideal setting for outdoor education, offering students the opportunity to connect with Alberta's natural heritage while exploring key ecological concepts firsthand.

The Trail: Beaver Pond Trail

The Beaver Pond Trail, a 3.5-kilometre loop, offers an accessible yet rich experience for students and educators alike. Winding through aspen forests, open meadows and wetlands, this trail showcases Alberta's diverse ecosystems in an approachable half-day hike. It is an ideal setting for students to observe wildlife, study wetland ecosystems and experience the calm of nature.

Educational Connections

For teachers, the trail is a natural fit with many curricular connections:

- Science: Study animal tracks, identify native plant species and explore wetland ecology
- Social Studies: Discuss the historical significance of the area for Indigenous communities and the role of Elk Island in bison conservation
- Physical Education: Introduce students to outdoor safety, navigation and hiking skills

Trail Highlights

One of the highlights of this trail is the opportunity to see beaver dams up close. Students can observe firsthand how beavers shape their environment—a perfect segue into discussions about ecosystems and biodiversity. The park is also home to bison, elk, moose and several species of birds, offering countless moments of discovery.

Tips for Educators

- Prepare Students: Before heading out, discuss what to expect and set learning goals. Challenge them to find specific plants, animals or signs of ecological activity.

- Engage the Senses: Encourage students to engage all their senses—listen for bird calls, feel the textures of bark and leaves and observe the changing landscapes.
- Reflect: After the hike, take time for a quiet reflection or journaling activity, allowing students to connect their experiences with broader environmental concepts.

A Trail Worth Teaching

Whether you are leading a field trip or seeking inspiration for your next lesson, the Beaver Pond Trail offers an accessible and impactful outdoor experience. It is a reminder that you do not have to travel far to find nature's classroom—it might be just a short drive from your school.

Elk Island Scavenger Hunt

Explore the beauty of Elk Island National Park while completing this scavenger hunt! Work individually or in small groups to find as many of these items as possible. Record your observations in a journal or take pictures where appropriate. Remember to respect nature—do not disturb wildlife or remove any natural objects.

Scavenger Hunt Items:

☐ A beaver dam or signs of beaver activity (chewed logs, lodges)

☐ Animal tracks in the dirt or mud—identify the animal if possible

☐ A bird with bright colours

☐ A tree with bark peeling off

☐ A wildflower in bloom

☐ A squirrel or chipmunk gathering food

☐ A feather on the ground

☐ An insect crawling on a leaf or tree

☐ A nest (bird nest, squirrel drey, or beaver lodge)

☐ A pond or wetland habitat

☐ A fallen tree that provides habitat for other organisms

☐ A plant with berries (do not eat!)

☐ A tree that looks different from the others nearby

☐ A hole or burrow made by an animal

☐ Mushrooms or fungi growing on a log or tree

☐ A bird in flight

☐ A sound made by an animal—describe it

☐ A bridge or boardwalk along a trail

☐ A spot with a great view—describe what you see

☐ A park sign—what does it tell you?

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.

Conferences
- Our conferences feature 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.

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, date and time TBD.

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/Speciality _____

__ New Membership __ Renewal of Membership __ Free Student Membership __ $25 Regular Membership

__ $30 Subscription __ $10 EECOM Membership (in addition to GEOEC membership)

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.

Membership information and subscription forms are available online at www.geoec.org.

Publishing Under the

Personal Information Protection Act

Under the *Personal Information Protection Act* (*PIPA*) of Alberta, 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.

School boards sometimes obtain blanket consent to publish students' and/or teachers' personal information under two new acts brought into force on June 13, 2025: the *Access to Information Act* (*ATIA*) and the *Protection of Privacy Act* (*POPA*). However *PIPA*, *ATIA* and *POPA* 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 Creative and Publishing Services 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.

Notify the ATA privacy officer immediately of any incident that involves the loss of or unauthorized use or disclosure of personal information, by calling Barnett House at 780-447-9400 or 1-800-232-7208.

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)

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: _____

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: _____

Name (Please print): _____ Today's Date: _____

The Alberta Teachers' Association

For more information on the ATA's privacy policy, visit **www.teachers.ab.ca**.

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