



Mining Matters Annual Newsletter

2023



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MESSAGE FROM THE PRESIDENT



In the wake of the pandemic, we celebrated a return to in-person program delivery this year. This newsletter highlights our proud accomplishments. Our charitable endeavours thrive thanks to the steadfast support of our donors and sponsors. To our returning supporters, thank you for your unwavering loyalty. To those joining us for the first time, we extend a warm welcome and express our deepest gratitude for your invaluable support.

Your commitment fuels Mining Matters mandate to broaden students' understanding of Earth science, allowing us to emphasize the crucial role of rocks, minerals, metals, and mining in daily life. Your support aids in promoting awareness of diverse career opportunities within the minerals industry.

Here's a glimpse of our impact in 2022-2023:

- Engaged 33,500 individuals in Earth science activities nationwide.
- Reached 2,016 participants through our Indigenous Communities Education and Outreach Programs and GEMS Kits dedicated to inspiring underrepresented youth to explore geology, engineering, mineral exploration, mining, and sustainability.
- Fostered mineral literacy for over 15,500 students through Teacher Training and School Programs.
- Ignited 9,993 minds at career expos, gem and mineral shows, STEM fairs, and industry gatherings.
- Teamed up with STEM organizations, impacting 5,255 young minds through our innovative programs and resources.
- Introduced *Robotics Rocks!* to over 150 students in Nunavut's Kitikmeot Region.
- Welcomed 113,010 visitors to our website for valuable resources and guidance.

In addition to these remarkable achievements, we also:

- Launched a successful pilot workshop series on critical minerals for high school students.
- Unveiled *The Core Shack*, our latest virtual escape room challenge.
- Led unique tours for teachers, offering insights into modern mining, sustainability, and career paths, while showcasing community impact and curriculum possibilities.
- Released our *Critical Connections* poster in multiple languages.

We invite you to delve into our achievements, which showcase our industry and Canada's natural resource treasures. We encourage you to share this newsletter and spread the importance of minerals education. Thank you for your support.

A handwritten signature in black ink that reads "Patricia Dillon".

Patricia Dillon
President and CEO



A SUCCESSFUL PILOT WORKSHOP SERIES ON CRITICAL MINERALS

In a rapidly evolving world driven by technological advancements, understanding the significance of critical minerals has become paramount. With support from Natural Resources Canada, the Government of the Northwest Territories, the Canadian Geological Foundation, the Canadian Ecology Centre, and the Royal Ontario Museum, Mining Matters piloted a workshop series to engage high school students in a comprehensive exploration of critical minerals. Through hands-on activities and interactive discussions, participants delved into the properties, applications, and global implications of select critical minerals.

Module 1: Critical Minerals Lab

The workshop kicks off with the Critical Minerals Lab, where students embark on a journey of discovery. They gain firsthand experience in investigating the unique properties and engineering applications of critical minerals. This module sparks curiosity and lays the foundation for deeper exploration.

Module 2: Deconstruct Technology

In Module 2, students are introduced to the global interconnectedness fueled by critical minerals. Working collaboratively, they dissect a smartphone to uncover the critical minerals within. This exercise not only highlights the pervasive role of these minerals in our daily lives but also traces their origins, illuminating the industry's profound impact on global markets and economies.

Module 3: What's Next?

The culmination of the workshop series is Module 3, an engaging World Café discussion. Armed with newfound knowledge, students dive into conversations surrounding critical minerals. They consider the social and environmental implications of mineral extraction, fostering a diverse array of perspectives in a respectful and inclusive environment.

Students come to recognize the pivotal role of critical minerals in our collective journey towards sustainability. They witness the direct impact of critical minerals on their personal technologies and gain a deeper appreciation for the resources that underpin their devices, fostering a sense of responsibility towards sustainable consumption.

"From my own involvement and the feedback of my students in the Critical Minerals pilot program," remarked Kevin Baker, a respected Technological Education Teacher from the North Bay region, "it's clear that this workshop addresses an important need by providing relevant information to high school students. The workshop's focus on a growing industry crucial to Canada's economic future and encourages students to explore the importance of critical minerals in personal and eco-friendly technologies, prompting discussions about the benefits and drawbacks of their extraction on local communities and the environment."

Gratitude is extended to the 347 students and 7 dedicated teachers from Saskatchewan, Manitoba, and Ontario who actively participated in this important pilot, offering invaluable feedback.





SUPPORTING SASKATCHEWAN TEACHERS

In collaboration with the International Minerals Innovation Institute (IMII), Mining Matters successfully completed a three-year teacher training initiative aimed at enhancing mineral literacy with STEM in Saskatchewan. This transformative project provided invaluable training and resources for both on and off-reserve teachers and students across the province.

Through a series of in-service training workshops, we implemented 40 comprehensive classroom resource kits. Each kit contained an array of rock and mineral samples, testing equipment, visuals, videos, informative books, posters, educational games, detailed maps, and over 30 lesson plans. Notably, these kits were contextualized for delivery in Saskatchewan, aligning with provincial curriculum expectations and supporting teachers' professional development.

Additionally, we collaborated closely with the Saskatchewan Mining Association (SMA) to include a selection of their educational resources, notably the SMA Potash Kit, Explore for More Career Profiles, and a series of Indigenized lesson plans produced by the SMA about rocks, minerals, metals, and mining. In consultation with Ms. Sharon Meyer, an Indigenous Education Consultant based in Saskatchewan, a selection of Mining Matters lesson plans were thoughtfully adapted to incorporate Indigenous perspectives. This collaborative effort ensured that our resources not only met the needs of the classroom but also honoured the rich cultural heritage of the province.

The impact of this initiative has been profound, with 48 educators participating and the potential to reach a minimum of 1,200 students. As the kits continue to be utilized, this reach is set to double each year, promising a legacy of enhanced mineral literacy.

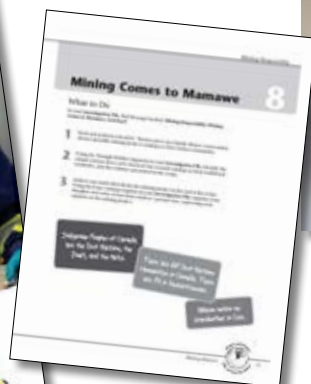
Ms. Meyer emphasized the significance of this project, stating, "I am proud that Mining Matters reached out to foster awareness and transmit traditional language and, in this case, Cree language and culture. It is meaningful that an organization such as Mining Matters is developing materials and activities for the classroom that include Indigenous perspectives. The awareness to include traditional knowledge and perspectives demonstrates the intent to honour the act of reconciliation."

We extend our thanks to IMII and SMA for their invaluable support in making our three-year teacher training initiative a resounding success.

Here are the reflections of some of the teachers involved:

Kortney McDonald, an elementary teacher from Saskatoon shared, "The resource [kit] has made a huge impact on my lessons and my students' learning. The lesson plans and activities are age-appropriate, curriculum-based, engaging, and filled with lots of hands-on materials. As a teacher, it can be difficult finding hands-on lessons, at a low cost, with limited prep work. This resource has everything needed and it makes my students excited to learn about the world around them."

Allison Hull, a middle school teacher from Preeceville, expressed, "Having a PD opportunity along with a kit to explain some of the lessons, how to use the kit, and where to access resources is a fantastic idea. Most often we purchase resources and are left to 'figure it out,' which can be overwhelming. I feel confident I can select lessons and incorporate them into my unit planning."



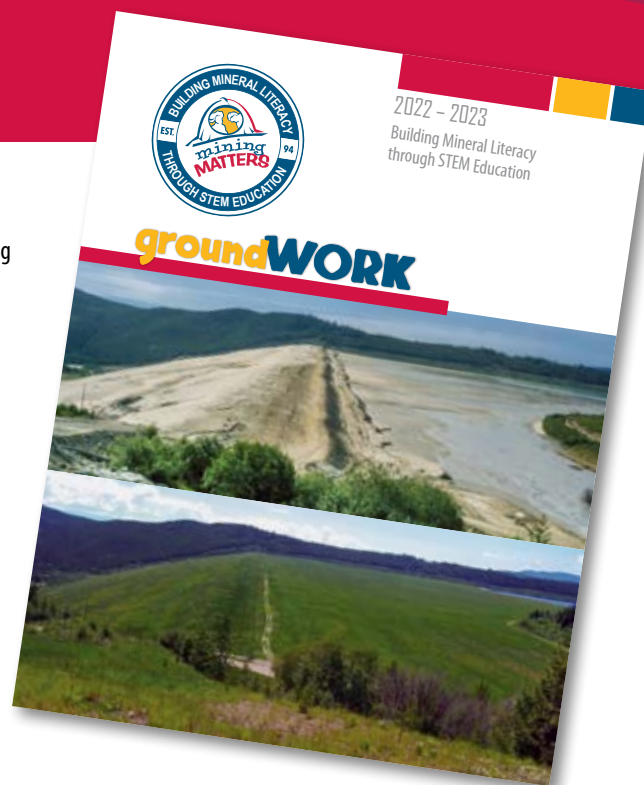
groundWORK

Mining Matters annual bilingual educator newsletter, *groundWORK*, is designed to inspire and empower teachers in mineral resources education. This publication is filled with informative articles, resource updates, interactive activities, field trip suggestions, teaching aids, contests, and more.

The 2022-2023 edition of *groundWORK* showcases our dedication to enhancing Earth science education. It delves into how mining companies are reevaluating waste material, uncovering valuable metals and minerals, and exploring innovative applications, offers an in-depth exploration of platinum's unique properties and uses, and provides a historical perspective on mineral pigments in art, highlighting their ongoing significance in modern times.

Our career spotlight aims to enlighten educators and students about potential career paths by showcasing an accomplished professional. One of our featured activities encourages students to grasp the global importance of critical minerals, prompting them to reflect on the roles these minerals play in their lives and consider the social and environmental connections to their extraction and use.

We invite you to explore this invaluable resource and discover a wealth of tools and inspiration to ignite the passion for Earth science in teachers and their students.



TOURS FOR TEACHERS

Mineral Resources and Mining Education Tours provide educators and mineral resource development advisors with immersive professional development in the fields of modern mining, sustainability, safety, and career opportunities. Sponsored by the Ontario Mining Association, the Canadian Ecology Centre, the Canadian Institute of Mining, Metallurgy and Petroleum, and Mining Matters, these tours offer on-site visits, engaging sessions with industry experts, and access to valuable educational resources.

The Life in a Mining Camp Tour, held in August in Thunder Bay and Nipigon, featured a visit to Impala's Lac des Iles Mine. Teachers had the opportunity to explore the underground operation, ore processing mill, open pit, and tailings management facility. They attended management and health and safety meetings, and an exploration department presentation, fostering direct engagement with industry professionals. Mining Matters delivered a presentation to more than 50 Impala staff and the participating educators. Teachers stayed overnight at the mine's camp before visiting geological landmarks including Kakabeka Falls, Sleeping Giant, and Ouimet Canyon Provincial Parks. The tour ended with a visit to Amethyst Mine Panorama for a deeper understanding of amethyst geology and a comparison of industrial and artisanal mining methods. We are grateful to Impala Canada for hosting such an in-depth and informative tour.

In November, the Mining and Mineral Resources Teachers' Field Tour provided a unique professional development experience with a focus on the mine service supply sector. Aimed at elementary and secondary educators from North Bay, including those from the Specialist High Skills Major in Mining program, co-op programs, and the Ontario Youth Apprenticeship Program, this tour included industry presentations and site visits to Redpath Mining and Boart Longyear. Each participating teacher received a collection of educational resources on minerals, mining, and careers for integration into their classrooms.





EUREKA SECONDARY SCIENCE CONFERENCE

At the Eureka Secondary Science Conference, Mining Matters had the privilege of connecting with 180 enthusiastic educators from the Toronto District School Board. This event marked a significant milestone, being the largest gathering of secondary science educators since the pandemic began.

During the conference, Mining Matters focused on raising awareness about Canada's critical minerals. These minerals, pivotal to modern industry, technology and the transition to net-zero, hold paramount importance for our nation's progress and global standing. Teachers gained a deeper understanding of these essential resources, equipping them to convey this knowledge effectively to their students.



FOSTERING EARTH SCIENCE EDUCATION AND ENGAGEMENT VIRTUALLY

Throughout the 2022-2023 academic year, Mining Matters conducted nearly 150 student workshops tailored to meet provincial and territorial curriculum expectations. These workshops featured local and regional perspectives and showcased Canadian mineral samples. Our efforts reached an unprecedented 5,312 students and 216 teachers, marking a significant milestone in our outreach.

Thanks to the generous support of CIM Northern Gateway, the Government of the Northwest Territories, Impala Canada, Kinross Gold Corporation, Toronto District School Board, and York Region District School Board, we were able to deliver workshops in both official languages and reach underserved communities, expanding our impact and inclusivity. Teachers were given the flexibility to choose from four distinct workshop themes, ensuring that the content was relevant and engaging for their students.

1. "Minerals": This module delves into the physical characteristics of minerals, offering students insight into their everyday applications.
2. "Rocks": Students embark on a journey through the rock cycle, uncovering clues that enabled them to identify mystery rocks.
3. "Mining": This workshop provides a comprehensive overview of the mining cycle, including discussions on its impacts, benefits, and the responsibility towards the environment and communities.
4. "What on Earth is in your stuff?": By examining maps to locate Canadian sources of rocks, minerals, and metals, students learn to connect these materials to their daily lives. This module also emphasizes the importance of responsible consumption and finite resources.





GAC-MAC 2023

The Joint Annual Meeting of the Geological Association of Canada, Mineralogical Association of Canada, and Society for Geology Applied to Mineral Deposits was held in Sudbury, at Laurentian University, in the spring. Mining Matters participated in the conference partnering with the Association of Professional Geoscientists Ontario (APGO) Education Foundation and Carleton University to convene a Geoscience Education and Communication Special Session that included 23 in-person and virtual oral and poster presentations, delivered by delegates across Canada. In the session, attended by 40 delegates, Mining Matters delivered a presentation describing the new Critical Minerals Workshop Series and *Critical Connections* poster. The partners also planned and delivered a post-conference professional development workshop featuring a walking geological field trip of Laurentian University's campus, delivered by celebrated Geoscientist and Science Communicator David Pearson.

MINERALS INDUSTRY CAREERS THAT MAKE A DIFFERENCE

When it comes to career choices, a key decision-making factor for today's youth is how they can "make a difference" in the world through their work. Traditionally, Mining Matters has approached minerals industry career education by showcasing the range of careers available in each phase of the mine life cycle. As a result of lessons learned, our approach to career education now also focuses on raising awareness about how a career in the minerals industry appeals to youth's values and achieves their goal of making a difference. In our new career presentation, aimed toward students, educators, and industry, we open with an inspiring view of the Earth from the International Space Station and an inspirational quote from Canadian Astronaut Chris Hadfield where he shares his career journey. An overview of modern mining, emphasizing elements of interest to youth including innovation and technology, and sustainability follows. The mine life cycle and some of the careers available in each of the phases are then described followed by a showcase of the MiHR *Mining Needs You* website. An early career testimonial is included that demonstrates how an early career geoscientist chose a mining industry career because it appeals to values, providing opportunities in remote areas of the country and materials important to addressing climate change. The Canadian Minerals and Metals Plan and the future of Mining in Canada is discussed. The United Nations Sustainable Development Goals are introduced, along with the critical role that mining plays in their achievement, including the



development of green technologies, the transition to renewable energy, and the management of mineral resources. The presentation closes with a discussion of opportunities for careers in professions and in the skilled trades, providing an overview of the breadth and depth of careers available in the minerals industry. The presentation has been delivered at career conferences, at Mineral Resources and Mining Education Tours, and will be included in programming going forward.

WHERE challenge

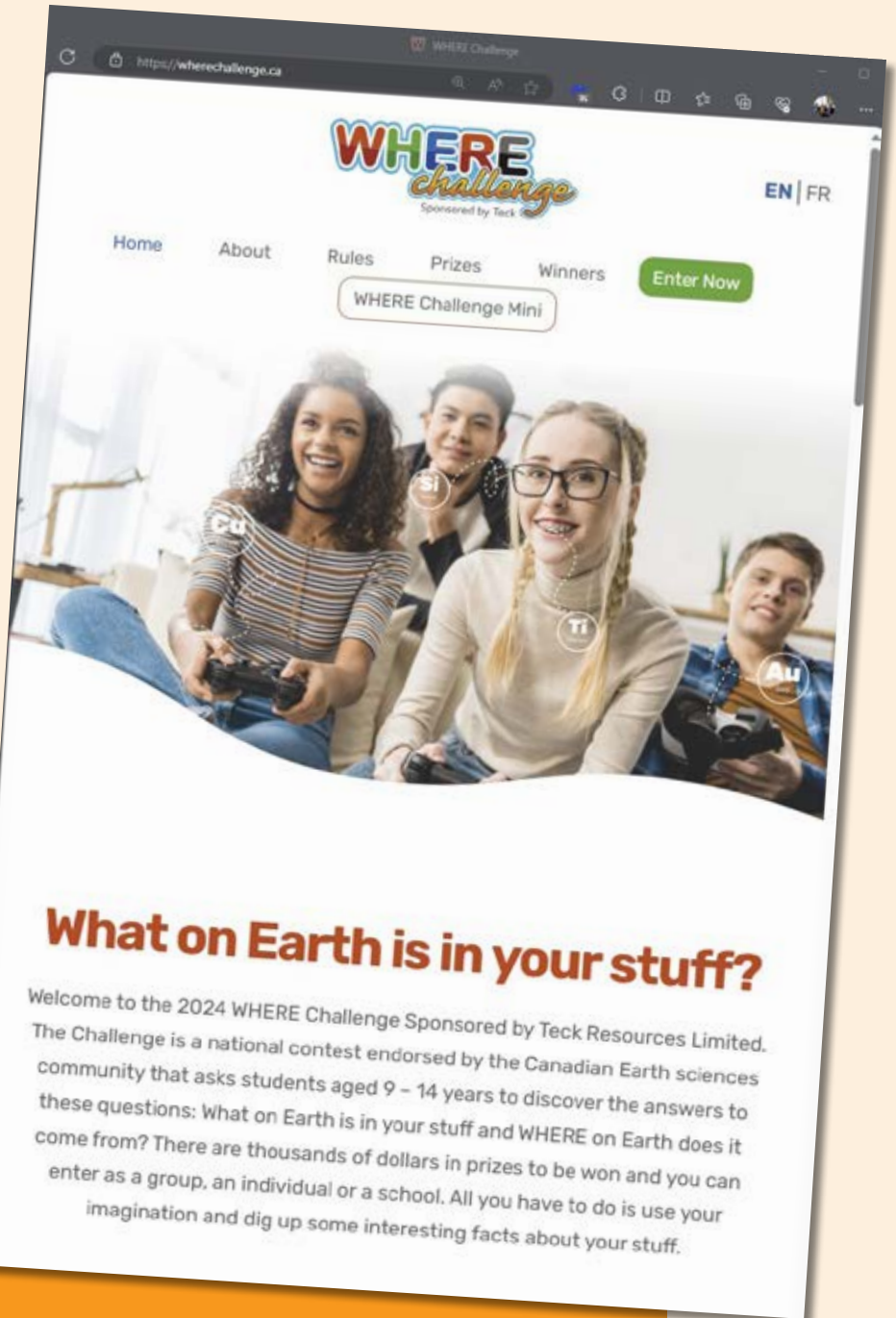
Sponsored by Teck

Mining Matters is thrilled with the entries that inspired over 250 students and teachers to answer “What on Earth is in their stuff?” and “Where on Earth does it come from?” in many creative ways. Our WHERE presentations in classrooms reached an additional 980 students.

The WHERE Challenge is a national contest endorsed by the Canadian Earth sciences community that motivates students ages 9 to 14 to explore the fields in which geoscientists work: **Water, Hazards, Energy, Resources, and the Environment**. Students discover why minerals matter and creatively tell a story through different mediums about why non-renewable resources are so important in everyday life. The contest ignites students’ curiosity about the origins of everyday items and encourages them to explore the mining, energy, and environmental sectors for possible career opportunities. The contest is a great way for students to combine classroom learning with real world relevance, curiosity with practical research and creative ideas with production technology.

Entries are received from across Canada and a volunteer judging panel made up of industry and Earth science partners selects winners who receive cash prizes. Be sure to check out the winning entries at (WHEREChallenge.ca).

The WHERE Challenge is made possible with the generous support of Teck Resources Limited. We are incredibly grateful for their ongoing commitment.



WHAT ON EARTH IS IN MY PENCIL AND WHERE ON EARTH DOES IT COME FROM?

What is a pencil?
A pencil is a tool that is used for writing and drawing. As a kid you are taught how to hold a pencil. There are many types of pencils. Analytically young or old can use a pencil. Pencils come in different colors, sizes, and designs. The first pencil ever made was just graphite wrapped around a string. Later graphite was inserted into wooden sticks which created the standard 6B pencil. Unlike a pen, with a pencil you can erase your written messages, without crossing them.

BRIEF HISTORY OF PENCILS



What on Earth is in your stuff?

Welcome to the 2024 WHERE Challenge Sponsored by Teck Resources Limited. The Challenge is a national contest endorsed by the Canadian Earth sciences community that asks students aged 9 – 14 years to discover the answers to these questions: What on Earth is in your stuff and WHERE on Earth does it come from? There are thousands of dollars in prizes to be won and you can enter as a group, an individual or a school. All you have to do is use your imagination and dig up some interesting facts about your stuff.



PDAC CONVENTION

During the PDAC 2023 Convention Mining Matters organized an enriching experience for a cohort of high school students from C.W. Jefferys Collegiate Institute in Toronto. They were guided through the trade show, gaining valuable insights into mineral exploration and the diverse career prospects within the industry. Knowledgeable industry speakers, chosen from among the exhibitors, provided impactful presentations at their respective booths. Moreover, a select group of 18 teachers were granted an all-access pass thanks to the generosity of the PDAC, enabling them to fully immerse themselves in the exhibits and attend technical presentations. This initiative aimed to inspire and inform both students and educators about the exciting opportunities within the world of mineral exploration.



Every year, PDAC wholeheartedly supports our participation in the Convention. Here, we actively connect with our supporters, forge alliances with potential collaborators, orchestrate a successful silent auction, and actively recruit post-secondary students and recent graduates for our summer internship program.

We wish to thank PDAC for decades of steadfast support for our education and outreach efforts.



MINING MATTERS CLASSROOM RESOURCE KITS

Our classroom resource kits are the result of a collaborative effort between educators and experts in Earth science and mineral resources. Designed to align with provincial Earth science and Geography curriculum requirements, these kits boast a wealth of valuable materials. Each kit includes numerous lesson plans, black line masters, abundant mineral and rock samples, essential equipment, and visual aids for students. Available in both official languages, they are accessible through our in-service workshop.

Thanks to the generous support of BMO, we're able to ensure affordability for schools. By educating teachers, we trigger a significant ripple effect. These educators not only directly impact their own students but also share their newfound resources with colleagues. Some even take on the role of training others to effectively deliver our material.

In the past year, we were able to provide 46 teachers with classroom resource kits, reaching an estimated 1,150 students. Mining Matters extends heartfelt gratitude to BMO for their invaluable support in making these crucial resources available to classrooms across the country.



A RECAP OF ENRICHING FIELD TRIPS

Thanks to the generous support of SGS Canada Inc., Mining Matters provided enriching field trips for six schools, focusing on geoscience, mineral resources, and mining. A total of 246 students, teachers, and parent volunteers had the opportunity to partake in these unforgettable experiences. Let's take a look at some of the highlights.

Geological Marvels at the Royal Ontario Museum (ROM)

For many high school students from Hagersville Secondary School in Hagersville, ON, visiting the ROM was a first-time experience. They were immersed in exploring the Teck Suite of Galleries, marveling at Earth's Treasures, and discovering the captivating Dinosaur exhibits.

Adrienne Roberts, a teacher from Hagersville Secondary School, shared, "The trip was an amazing learning experience and an opportunity that many would never have had without your support."

Rocks and Minerals at the University of Waterloo Earth Sciences Museum

Students from two elementary schools in Acton and Kitchener, ON, delved into the differences between rocks and minerals, enjoyed a fascinating tour of the Mine Tunnel, and participated in a fossilized fish dig and a museum-wide scavenger hunt. This hands-on experience allowed them to deepen their understanding of the Rocks and Minerals curriculum.

Kerry Morrison, a Grade 4 Teacher from Meadowlane Public School, expressed, "It was a great experience to extend our learning outside of the classroom and see first-hand a variety of rocks and minerals."

Prehistoric Wonders at the Canadian Fossil Discovery Centre

Home to a vast collection of marine reptile fossils, the Canadian Fossil Discovery Centre in Morden offered an incredible learning opportunity. Students from Yellowquill School in Portage la Prairie, MB, explored the significance of the fossils found in Manitoba and engaged in exciting activities, including digging for fossils and reassembling prehistoric skeletons.

History and Geology at Fort Langley National Historic Site

Students from Kanaka Creek Elementary in Maple Ridge, BC, visiting Fort Langley were introduced to its historical significance as a Hudson's Bay Company trading post. They also had the chance to explore the geological context of the area, including types of rocks, soils, and the shaping influence of the Fraser River.

Geological Wonders in the Ottawa Region

The field trip itinerary in the Ottawa region was nothing short of captivating. Students took part in geological mapping of fault lines at Hogsback Falls, embarked on a guided tour of Lafleche Cave in Gatineau, and visited Champlain Lookout in Gatineau Park.

Robert Barter, Head of Canadian and World Studies at A. Y. Jackson Secondary School in Kanata, ON, emphasized the lasting impact of such experiences, saying, "For many of my students, this was their first time holding a rock hammer or even visiting Gatineau Park. Because of experiences like this, many of my former students have gone on to careers in Earth science."

These field trips have sparked curiosity, promoted hands-on learning, and opened students' eyes to new opportunities and potential careers in geoscience, mineral resources, and mining.



EMPOWERING INDIGENOUS YOUTH

OUTLAND YOUTH EMPLOYMENT PROGRAM

In the summer of 2022, Mining Matters proudly continued its long-standing collaboration with the Outland Youth Employment Program (OYEP) to deliver eight impactful *Mining Rocks Earth Science Programs* in British Columbia, Alberta, Manitoba, Ontario, and Québec.

OYEP's mission is to provide Indigenous youth with a six-week work-study experience that offers land-based education, training, and employment opportunities. By using natural resources management as a platform, OYEP aims to develop transferable life and work skills. Over the past two decades, OYEP has successfully engaged hundreds of Indigenous youth, providing them with income and invaluable learning opportunities.

Mining Matters involvement in the program focused on facilitating engaging activities and leading discussions about potential career paths in the mining industry. The *Mining Rocks Earth Science Program* offers students informative and hands-on learning experiences, where they discover the significance of rocks, minerals, metals, and mining. Through engineering challenges, participants collaborate in teams to build the strongest headframe and design effective water filters, fostering teamwork and problem-solving skills.

Incorporating resources from Guiding Circles, an Indigenous guide to career exploration that uses storytelling to help learners discover their skills, talents, and passions, the program also encouraged meaningful discussions about participants' values, introducing them to various career opportunities available in the mining industry. Participants engaged in simulated geological mapping, completed a GPS scavenger hunt, created art with metal foil, discussed the impacts and benefits of mining, and explored robotics in mining.

Mining Matters reached out to past employees, inviting them to return and lend their industry expertise. Many former employees generously responded to the call, bringing a wealth of knowledge and experience to support the program's success.

"I loved working with Mining Matters again," said Jennifer Taylor, Metallurgist with Glencore and former program Intern. "Mining Matters played a huge role in my career development, and I often refer back to my experiences with the team!"

Mining Matters extends its appreciation to OYEP and their parent company, Horizon North Camp and Catering Partnership, for their continued collaboration and support in reaching more Indigenous youth with Earth science and mineral resources education.



ENVIRONMENTAL FORUM IN SALLUIT

In the fall of 2022, Mining Matters continued its valued partnership with Glencore's Raglan Mine by bringing *Mining Rocks* programming to students at École Ikusik School in Salluit, QC, as part of the company's environmental forum. This specialized program catered to secondary students and focused on bilingual activities centred around mining and water filtration. Its overarching goal was to provide students with hands-on experiences that shed light on the mining industry, while also highlighting potential career paths in mineral exploration and mining.

Over the course of two days, 70 students, accompanied by their teachers, participated in these one-hour sessions. The program placed a strong emphasis on cultivating essential skills such as teamwork, problem-solving, effective communication, environmental stewardship, and critical thinking.

In addition, a professional development workshop was conducted for elementary teachers at Pigiurvik School. This workshop revolved around efficient implementation of the *Deeper and Deeper: Discovering Rocks and Minerals* classroom resource kits. Aimed at elementary grade levels, the kit comes with over 50 rock and mineral samples, equipment, visual resources, and 36 lesson plans on topics related to rocks, minerals, responsible mining, soil, and erosion. The teachers had the opportunity to review the lesson plans and rock and mineral samples provided in the kit. The teachers expressed gratitude for the valuable resources made available to them for effective delivery of the Earth science curriculum.

An evening event was also organized to foster community involvement and engagement. This event featured activities including soapstone carving and amethyst jewellery-making, attracting a total of 45 participants.

We thank Glencore for this collaborative opportunity and their ongoing commitment to our education and outreach programs.



GEMS KITS IN NOVA SCOTIA

With the generous support from the Mineral Resources Development Fund administered by the Nova Scotia Department of Natural Resources and Renewables, and Signal Gold, Mining Matters created 180 GEMS Kits aimed at engaging underrepresented youth in Earth science and mineral resources education. GEMS is an acronym for Geology, Engineering, Mining, and Sustainability.

The GEMS Kits were specifically tailored for intermediate grade levels and consisted of 13 hands-on activities, providing all the necessary equipment, supplies, and video instructions to ignite curiosity and generate awareness about Earth sciences and mineral resources. They offered an exciting opportunity for

youth to explore the Earth's structure, learn about minerals and rocks, engage in engineering challenges, and discover careers in the minerals industry.

The GEMS Kits not only included STEM-related activities but also contained Earth science-themed artistic projects, promoting creativity and further enhancing the learning experience. These kits were customized to align with the unique geological legacy of Nova Scotia, incorporating the Nova Scotia Pebble Guide, Nova Scotia Rocks! poster, and Nova Scotia Minerals and Gems publications, generously provided by the Atlantic Geoscience Society, as well as bookmarks from the Mining Association of Nova Scotia to promote awareness of the informative website NotYourGrandfathersMining.ca.



We were pleased to collaborate with the Acadian First Nation Youth Centre, Bear River First Nation Muin Sipu Learning Centre, Imhotep's Legacy Academy, Phoenix Youth and Community Centre, Boys and Girls Clubs of Cape Breton, Truro and Colchester, and Preston.

Feedback from educators and youth workers has been overwhelmingly positive. Danielle MacIntyre, the Manager of the Muin Sipu Learning Centre, expressed her excitement, stating, "The kits are amazing! The teachers and students are so excited to use them! Thank you so much for the opportunity, and we look forward to letting you know how the project goes!"

Kristen Gallant, the Youth Coordinator of the Boys and Girls Club in Truro and Colchester, witnessed firsthand the enthusiasm of the youth while engaging with the GEMS activities. She shared, "It's really nice to see the youth engage with learning and get excited about it outside of school. Many of them have had a much different relationship with school after returning post-lockdown; it's nice to see that those new difficulties they're facing don't stifle their ability and passion for learning outside of that environment."

We extend our appreciation to the Government of Nova Scotia and Signal Gold for their commitment to promoting mineral literacy and supporting this valuable educational opportunity.



SCIENCE LITERACY WEEK

Mining Matters celebrated another successful Science Literacy Week initiative, made possible through the generous support of Labrador Uranium and the Natural Sciences and Engineering Research Council of Canada (NSERC). Science Literacy Week is a nationwide celebration of science aimed at inspiring curiosity and exploration in children and families across Canada.

In collaboration with our partners, we prepared and distributed 108 GEMS Kits to six coastal communities in Labrador: Rigolet, Postville, Hopedale, Makkovik, Natuashish, and Nain.

Since 2017, Mining Matters has played an integral role in Science Literacy Week celebrations, with this year marking our third in providing GEMS Kits to community partners as an alternative to in-person workshops.

ROBOTICS ROCKS! IN THE KITIKMEOT REGION



Mining Matters teamed up with schools throughout the Kitikmeot Region in Nunavut to deliver the exciting *Robotics Rocks!* workshop aimed to engage students in hands-on activities that explored the practical applications of robotics in the mining industry while promoting career opportunities in mineral exploration and mining.

With support from the Kitikmeot Inuit Association, the *Robotics Rocks!* workshops were specifically designed for grade 7 and 8 students at Kiilik High School, Kugluktuk High School, Qiqirtaq High School, and Arviligruaq School. A total of 158 students, along with their teachers, participated in the three one-hour modules that emphasized skills in coding, research, teamwork, problem-solving, communication, data analysis, and critical thinking.

The students enthusiastically embraced the program. The activities that stood out as highlights of the program included the *Exact Instructions Challenge*, *Robot Programming*, and *Mapping with the Ozobots*.

Priya Sharma, Educator and former General Manager of the Northwest Territories and Nunavut Chamber of Mines, joined the Mining Matters team during the workshops in Cambridge Bay and Kugluktuk. She provided valuable insights into the minerals industry in Nunavut and emphasized the diverse range of career opportunities available in the sector.



Community events were organized in each of the four communities to encourage community participation and engagement. These events saw attendees of all ages coming together to enjoy activities such as Soapstone Carving and Amethyst Jewellery-Making. The community nights were a resounding success, with positive feedback from participants expressing gratitude for hosting the events and providing food and transportation, especially in the extreme cold conditions.

The *Robotics Rocks!* workshops were successful in achieving their objectives, introducing students to the fascinating world of robotics in the mining industry and promoting STEM education and career pathways. By providing engaging, hands-on experiences, the workshops nurtured students' interest in Earth sciences and technology.

Mining Matters is delighted to have introduced the *Robotics Rocks!* initiative in Nunavut, in collaboration with the Kitikmeot Inuit Association. We will be continuing this essential educational partnership in 2023-2024 and look forward to further engagement with students, teachers and community members in the region.

UNVEILING THE THIRD EDITION OF GEMS

In the past year, Mining Matters celebrated a significant milestone with the launch of the third edition of our GEMS Kit. This achievement was made possible through the generous support of the Ontario Ministry of Mines. The third edition boasts 11 new activities, each designed to engage and educate students on various aspects of geology, engineering, mining, sustainability, careers, minerals in everyday life, and thematic crafts. With instructional booklets, demonstration videos, and all necessary supplies included, these kits are tailored to facilitate a seamless learning experience. In an effort to ensure inclusivity, the scavenger hunt activity was translated into Ojibway, Cree, and Oji-Cree, supporting language development initiatives.

A total of 450 GEMS Kits were dispatched to reach 13 First Nation communities in northern Ontario. The objective was clear: to ignite curiosity and foster a deeper understanding of Earth sciences, while simultaneously building essential mineral literacy among the youth in these communities.



It is our hope that this edition of the GEMS Kit not only educates but also ignites a passion for Earth sciences, poised to inspire the next generation. We extend our thanks to the Ontario Ministry of Mines for their unwavering support in making this initiative possible.

Throughout the implementation of these activities, youth:

- Unravel the geological journey of rocks in an engaging manner.
- Explore the dynamic world of volcanoes, from the explosive to the serene.
- Investigate varieties of quartz and create models to explore their crystal structure.
- Engage in a hands-on engineering challenge, crafting an excavator powered by hydraulics.
- Delve into the mining process and the importance planning for reclamation before mining begins.
- Embark on a scavenger hunt, uncovering the significance of minerals in our daily lives.
- Make connections between chemistry and microbiomes in mine waters, demonstrating water treatment techniques.
- Participate in a game of career bingo, offering insights into diverse career paths within the sector.
- Craft toothpaste with calcium carbonate, connecting minerals to everyday products.
- Utilize pebbles and art to inspire imaginative storytelling.



INDSPIRE NATIONAL GATHERING

The Indspire National Gathering for Indigenous Education held in November 2022, was a success, drawing over 1,360 dedicated educators. Our booth garnered substantial interest, showcasing the strong enthusiasm for our education and outreach

programs. After three years of virtual engagement, it was terrific to reconnect in person in Winnipeg.

We distributed a range of resources, including our educator newsletter *groundWORK*, the *Mining Makes it Happen* poster series (available in Ojibway, Oji-Cree, and Cree), activity books (available in Inuktitut and Inuinnaqtun), as well as colouring books. Attendees also gained insight into our WHERE Challenge, GEMS Kits, *Mining Rocks Earth Science Programs*, curriculum-linked teacher resources, and professional development workshops tailored for educators.

Participation in this conference offered important avenues for professional growth and reinforced our connections with both community and education partners.

We extend our gratitude to Impala Canada for making our presence at the National Gathering possible.

TRANSLATING CRITICAL CONNECTIONS INTO INDIGENOUS LANGUAGES

With the generous support of the Ontario Ministry of Mines, Mining Matters expanded its collection of translated resources. *Critical Connections*, the sixth instalment in our *Mining Makes it Happen* poster series, highlights 31 vital minerals, metals, and elements declared by the Canadian government as crucial raw materials for renewable energy, manufacturing, aerospace, defense, information and communications technology, agriculture, health, and critical infrastructure. This resource is now available in Cree, Ojibway, and Oji-Cree.





MINING ROCKS FOR INDIGENOUS YOUTH

Mining Matters is committed to extending our reach to urban, rural, and remote communities, providing resources and programs in mineral resources education. In the past year, our in-person *Mining Rocks Earth Science Programs* for Indigenous youth reached over 1,200 students, educators, and community members. None of this would have been possible without the generous support of our sponsors, to whom we extend our deepest gratitude.

Our Approach:

We ignite curiosity in Earth science and the minerals industry through immersive, hands-on educational experiences in schools, camps, and outreach events. Our innovative initiatives aim to enrich learning and inspire a lifelong interest in these fields. Additionally, we expose young minds to the diverse range of career opportunities available in the sector. Accomplished professionals and STEM role models share their personal journeys, providing invaluable career inspiration. We empower educators with curriculum-linked classroom resources and offer professional development training, ensuring they are well-equipped to effectively deliver Earth science education.

Success Stories:

In collaboration with the **Ontario Ministry of Mines**, Mining Matters joined forces with community partners to implement school programs in the First Nation communities of Aroland, Long Lake #58, Ginoogaming, and Marten Falls, ON. A teacher at Henry Coaster Memorial School in Marten Falls First Nation stated, "I really enjoyed the land-based learning – looking for rocks along the river shore." Students shared that some of their favourite activities included cookie mining, making fossil casts, learning about robotics in mining, using VR to operate a drone, and dressing up in personal protective equipment.

Alamos Gold generously sponsored our inaugural in-person program at West Lynn Heights School in Lynn Lake, MB, catering to students in grades 4 and 5. Alongside our hands-on activities, representatives from Alamos Gold provided valuable career insights by sharing their own professional journeys. An evening community event further strengthened family involvement, featuring activities including Soapstone Carving and Amethyst Jewellery-Making.

In partnership with **Evolution Mining**, our summer camp programs and community events engaged children, youth, and community members in Balmertown and Wasbauskang First Nation, ON. Representatives from Evolution Mining brought their expertise to the table, sharing invaluable career advice. One camper eagerly shared, "I had such a fun time and I'm excited for next year so I can be here again!"

Mining Matters and **Agnico Eagle Mines Limited** collaborated in Baker Lake, NU, for a career awareness event, providing hands-on activities to elementary and high school students, and offering insights into potential mining industry careers. Students explored mineral properties, recognized the link between mining and everyday items, engaged in reclamation challenges, and learned about responsible water usage. Employees from Agnico Eagle's Meadowbank Mine offered informative displays and experiential learning, while an evening community event encouraged wider participation.



With support from the **International Minerals Innovation Institute**, **Procon Group**, **Kitsaki Management Limited Partnership**, **Canada North Environmental Services** and **Kitsaki Vegetation Services LP**, Mining Matters conducted *Mining Rocks Earth Science Programs* in Air Ronge and Saskatoon, SK. These school programs covered topics in Earth science, mineral exploration, robotics in mining, critical minerals, and Saskatchewan's mineral resources, supplemented by insightful talks from industry experts. An extra-curricular Rock Club at the school in Saskatoon met with our team to take part in additional enrichment activities such as mineral fluorescence and petrographic microscopy.

Mining Matters was pleased to be part of the Resources and Energy Development Information (REDI) Session in Inuvik, NT, hosted by the **Government of the Northwest Territories Department of Industry, Tourism and Investment**. At this event, we actively engaged the public with interactive activities that showcased the critical role of mineral resources in modern society. Additionally, while in Inuvik, we conducted a workshop for the Experiential Science class at East Three Secondary School.

Mining Matters is driven by a shared commitment to empower Indigenous youth through education and exploration. Thank you to our community, education, industry, and government partners for their steadfast support.





THE CORE SHACK: VIRTUAL ESCAPE EXPERIENCE

If you managed to escape the *Refuge Station* and *Mine*, now you can solve the final challenge in *The Core Shack: Virtual Escape Experience*. We are pleased to share the last adventure of this series with everyone!

We again partnered with a capstone team from Ontario Tech University to create a prototype for *The Core Shack*. Players find themselves in a core shack with two locked doors. To solve the challenge, they must utilize clues hidden around the rooms and search for tools to help. As players explore the game, they will learn about the Geologic Time Scale, the mining cycle, and volcanoes.

“During our final semester at Ontario Tech University, our team, Free World Studios, was given the chance to work with Mining Matters to develop a virtual escape room game as our capstone project.” stated capstone student Andy Waterhouse. “This experience was nothing short of amazing. The Mining Matters team was very professional, respectful, and personable. Our team learned a lot about implementing accessibility functionality, working with clients, problem solving, collaboration, and many other invaluable industry related skills. Overall, we are all extremely appreciative of the Mining Matters team and this incredible experience!”

SenseTech, a game development company, was engaged to provide their expertise and ultimately hired Free World Studios to complete the game. Mining Matters is grateful to Ontario Tech University and SenseTech for their creative ideas and dedication during this collaboration. We would also like to thank Teck Resources Limited for sponsoring all three escape room experiences.



OTTAWA LAPSMITH AND MINERAL CLUB SHOW

In September, Mining Matters and the APGO Education Foundation co-hosted an educational exhibit and hands-on learning activities at the annual Ottawa Lapsmith and Mineral Club Show. The exhibit highlighted local and regional geology, including minerals, rocks, and stone, sand and gravel, along with Mining Matters and APGO Education Foundation materials and programs. The

2022 event marked the first in-person event since the COVID-19 pause. We recorded 534 engagements with visitors over the two-day event.

We would like to thank show participants Superior Gems and Jewellery, Gneiss Guy Minerals, Kerry Day, and Chez Schmidt for their generous donations in support of our annual silent auction, held during the PDAC Convention in March.



BANCROFT'S ROCKHOUND GEMBOREE

In collaboration, Mining Matters and the APGO Education Foundation curated a geoscience education exhibit and facilitated hands-on activities at the 2022 Bancroft Rockhound Gemboree, Canada's largest gem and mineral show held annually in August. Titled “The Geological Story of Bancroft,” the exhibit offered a comprehensive overview of the geological processes shaping the diverse rocks and minerals in the area, highlighting their practical applications and featuring a collection of local specimens. Tailored learning activities directly complemented the exhibit's themes, with young participants embellishing chalkboard frames with local mineral samples, while older youth crafted jewellery pendants from amethyst, Ontario's provincial mineral emblem. 1,055 visitors engaged with both the exhibit and hands-on activities.



We extend thanks to the Ontario Geological Survey Tweed Office for generously loaning us a set of high-quality museum specimens and historic publications, making this educational endeavour possible.



THUNDER BAY MINING DAY

The 8th annual Thunder Bay Mining Day, held at Marina Park in June, aimed to provide a unique and interactive platform for community members to connect with industry professionals and organizations, and learn more about the mining industry. Our team's participation was met with enthusiasm and had a positive impact on attendees of all ages.

The event saw the gathering of approximately 300 attendees—nearly half of them were between the ages of 5 and 15. It was terrific to see the event's success in attracting a younger audience, fostering an early interest in the mining industry and its various aspects.



Mining Matters brought a diverse range of interactive activities to engage and educate attendees. Among the most popular activities was *Mineral Discovery*, where participants had a hands-on experience applying identification methods used by geoscientists. Other activities aimed to raise awareness about the importance of mineral resources in our daily lives, shed light on potential career opportunities in the industry, and encouraged participants to match photos of mining operations with those of reclaimed sites.

One aspect that received appreciation from both community members and industry professionals was the availability of poster publications in English, French, Ojibway, Oji-Cree, and Cree.

Thunder Bay Mining Day provided an excellent opportunity to engage the community in STEM activities and foster connections with industry professionals. We are grateful to the team of volunteer event organizers and for the support provided by Bantrel, which made our participation in this successful event possible.



NEW BRUNSWICK MINING WEEK

In May, the Mineral Resources Division of the New Brunswick Department of Natural Resources and Energy Development partnered with the Quartermain Earth Science Centre, University of New Brunswick, Science East, Mining Matters, APEGNB, the New Brunswick Prospectors and Developers Association, the Research and Productivity Council, and the Atlantic Geoscience Society to host an open house and public lecture for the National Mining Week in Fredericton. The open house featured various educational displays and demonstrations for the public. Schools visited the open house in the mornings, and it was open to the public later in the day. Activities shared at the Mining Matters booth with the students and public included product matching, career matching, the rock cycle, reclamation matching, and mineral discovery. 1,200 students and 200 members of the public attended the event.

This was a valuable opportunity to build relationships with key partners in mineral resources education in the province.

We thank Dr. Robert Quartermain and the Government of New Brunswick for making our participation possible.

LIAMforum

The LIAMforum is an annual virtual conference that emphasizes the role that Gen Z will play in the transition towards a more sustainable, eco-friendly world. It also endeavours to shift the perception that young individuals hold towards the sector. Mining Matters took great pride in contributing to a panel entitled "A Longer View: Indigenous Communities' Approach to Sustainable Resource Development and Vice-Versa." This discussion considered inquiries such as: What invaluable insights can Indigenous communities offer to ensure sustainable development occurs in a more robust and enduring manner? Are there more effective methods for the resources sector to engage meaningfully with Indigenous communities? Could a deeper involvement of Indigenous communities lead to heightened participation of young Indigenous individuals in the natural resources sector? Moreover, is there potential for resource companies, Indigenous communities, educational institutions, and governments to collaboratively improve the support system for young Indigenous individuals seeking careers in the sector?



QUÉBEC MINES + ÉNERGIE DÉCOUVERTE

Québec Mines + Énergie Découverte invited students and educators to explore Québec's rich natural resources last fall. The event focused on "Working Together for a Greener Future" and was part of the annual Québec Mines + Energy conference.

Students enjoyed a scavenger hunt, using passports to find answers at various booths covering mineral resource development, environmental concerns, education, and careers. The event emphasized innovation, robotization, electrification, advanced monitoring, site reclamation, wastewater treatment, and metal recycling.

Mining Matters engaged approximately 2,000 students and teachers at the conference. Through product matching activities, students learned about the real-world impact of minerals. The challenge was to pair household items with corresponding cards, mineral samples, and products. Teachers received resources for continued learning at school.

We would like to thank the Ministère des Ressources naturelles et des Forêts for the opportunity to take part in this important outreach event.



EARTH SCIENCE FOR SOCIETY

Earth Science for Society is an annual exhibition hosted in Calgary by the Canadian Society of Exploration Geophysicists. It features four themed pavilions: 'Energy for Us,' 'Resources and You,' 'One Dynamic Earth,' and 'Our Future!' These pavilions house interactive exhibits showcasing the vital role of Earth science in our daily lives. Geoscience volunteers actively guide students through the exhibits, providing valuable insights and potential career paths.

Mining Matters engaged 1,685 students, teachers, and members of the public with hands-on activities. These activities foster an understanding of Earth science, crucial for appreciating responsible consumption, resource management, natural hazards, climate science, and environmental concerns.



SCIENCE RENDEZVOUS 2023

Mining Matters and the APGO Education Foundation partnered to plan and host a public education exhibit for the Science Rendezvous Kingston event, held in the spring. The theme of the exhibit was the *Fossils of Kingston* and featured an impressive display of body and trace fossils, including pieces of the sea floor teeming with fossils, a hands-on learning activity where participants created their own trace fossils using modelling clay, and an interactive quiz. Visitors were eligible to enter a prize draw for one of three prize packs that included fossil soft toys, activity books, posters, a geode, and an amethyst jewellery-making kit.

Science Rendezvous 2023 set an attendance record of a whopping 5,337 visitors from the region; and 433 volunteers who included exhibitors from the Kingston area and beyond.



PARTNERSHIP WITH TRIPLE FLAG PRECIOUS METALS

We were invited to showcase our programs for Indigenous youth and feature a selection of our core activities and resources during a team event held by Triple Flag Precious Metals.

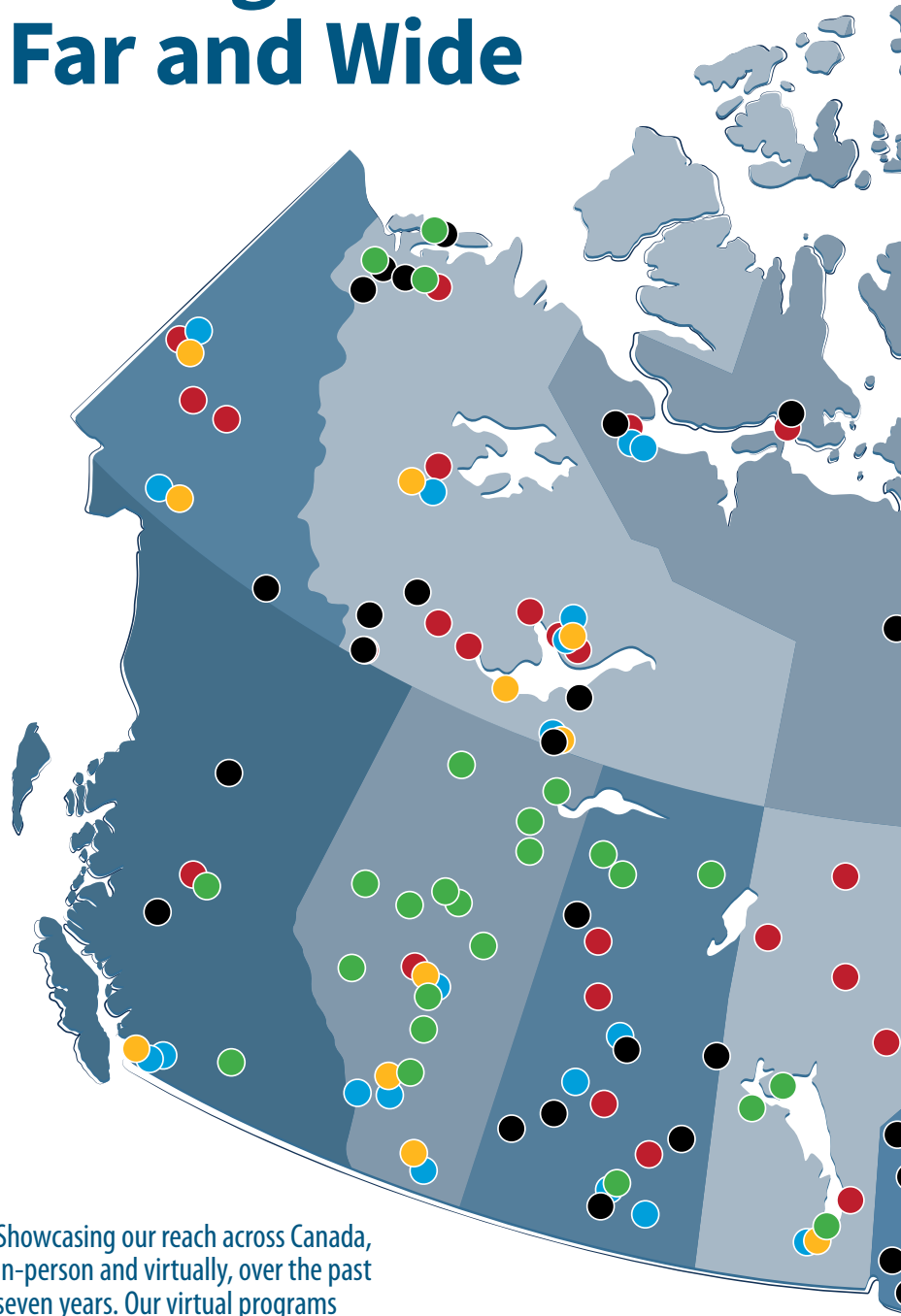
Executive Director, Laura Clinton, provided an overview of our education and outreach programs, and Triple Flag team members participated in a series of Mining Matters activities. They tested the properties of minerals and explored the minerals used to make everyday items through our *Mineral Discovery* and *Product Matching* activities. They also experienced *Operating and Reclaiming a Surface Mine* along with other activities featured in our GEMS Kits.

Mining Matters would like to thank Triple Flag for the opportunity to raise awareness about our organization and resources.



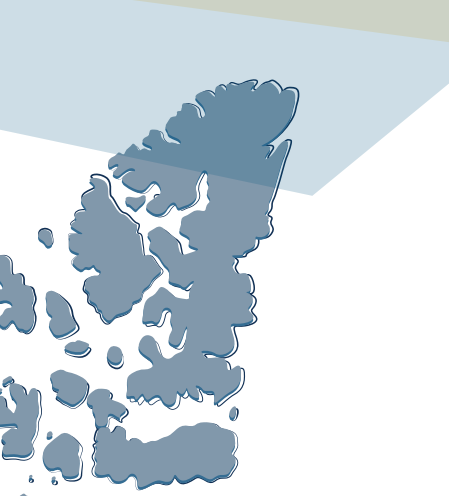


Mining Matters Far and Wide



Showcasing our reach across Canada, in-person and virtually, over the past seven years. Our virtual programs commenced in 2020.





- Teacher Training and School Programs
- Indigenous Communities Education and Outreach Programs
- Outreach Programs
- Partnership Programs
- Virtual Programs





WATERLOO-WELLINGTON CHILDREN'S GROUNDWATER FESTIVAL

Mining Matters teamed up with the University of Waterloo Earth Sciences Museum for the 2023 Waterloo Wellington Children's Groundwater Festival at Guelph Lake in June. This marked the first in-person festival since 2019, drawing students from grades 2 to 5 in schools across Guelph, the Waterloo Region, and Wellington County. Mining Matters equipped volunteers with materials and instructions to lead the *The Water Cycle - Moving Molecules* activity. Throughout the four-day festival, 771 parents were in attendance, while 3,475 students actively engaged in hands-on learning.



FOSTERING COLLABORATIONS

Partnerships lie at the heart of our mission. We equip our collaborators with tools and resources to conduct Earth science-focused activities in camps and classrooms. Moreover, we join forces with various groups and organizations to deliver insightful virtual workshops on rocks, minerals, metals, and mining.

In our dedication to building mineral literacy, we actively support the development of innovative tools and resources. By establishing connections with museums, universities, libraries, and STEM organizations nationwide, we ensure that our reach is extensive and inclusive.

This year, we were proud to collaborate with the Hamilton Branch of the Canadian Association of Girls in Science, enhancing our workshop offerings. Our longstanding partnership with the APGO Education Foundation allowed us to engage the public at critical outreach events. Collaborations with esteemed post-secondary institutions including Carlton University, Laurentian University, University of Waterloo, University of New Brunswick, and Ontario Tech University have led to impactful teacher development workshops, resource creation, amplified public engagement efforts, and delivery of specialized training for our employees.

Our deep appreciation goes to the Canadian Museum of Nature, Royal Ontario Museum, and the Snow Lake Mining Museum for their invaluable support in sharing educational resources and providing access to samples. We are also grateful to MiHR, the Ontario Mining Association, and Let's Talk Science for affording us the opportunity to contribute to initiatives aimed at fostering career awareness and shifting the perception of the industry.

To the dedicated industry professionals who generously volunteer their time with classrooms, libraries, and youth groups to share their passion - thank you for entrusting us to support your endeavours. We extend our sincere gratitude to CIBC and the William Pearson Family Foundation for their ongoing support of our partnership initiatives. Together, we are making a lasting impact in Earth science and mineral resources education.



INTERNSHIP SPOTLIGHT

Mining Matters is committed to providing impactful internships for post-secondary students and recent graduates in the minerals industry. Internships aim to equip recent graduates with experiences that serve as a springboard toward promising career prospects, in the minerals industry or a related field.

We facilitate networking opportunities, mentorship, and skill development in areas like communication, teamwork, leadership, problem-solving, and time management. And as STEM role models for youth, it allows them to share and build on their knowledge of geology, engineering, mining, and sustainability.

Here's what a few of our 2022-2023 interns shared about their experience with us.



"My time as a Graduate Intern at Mining Matters has been an incredible opportunity to combine my passion for teaching with my experience and knowledge in geoscience. It has also given me the opportunity to travel to exciting and remote places and work on varied projects and programming. This internship has taken me all over the country to Alberta, Saskatchewan, Ontario, New Brunswick, the Northwest Territories, and Nunavut. I enjoyed all the places I was able to travel, but going to the Kitikmeot Region of Nunavut was a particularly life-changing experience, since I got to see a very different way of life and culture. Before I went on my first trip with Mining Matters, I was told that although we go to communities with the intention of sharing knowledge about geoscience and the mining industry, we often come away as the ones who learned the most. In my experience I think this is absolutely true, since I have learned so much from my travels and the connections I've made with community members and students. The team at Mining Matters is also very enthusiastic and diverse and I feel that I have learned so much from my colleagues who bring such varied skills and creative approaches to the team. As someone who hopes to continue to work in education and outreach in the future, I have learned a lot about teaching and being adaptable. I have also built on many soft skills such as professionalism, presenting, communication, organization, and leadership. This internship has been, hands down, my favourite job that I have ever had. Not only has it challenged me to grow and experience new things, but it has also shaped my career goals moving forward and I will take away so many memories and experiences that I never would have found anywhere else."

Katie Klymyshyn

2022-2023 Graduate Intern, Education and Outreach Programs
University of Saskatchewan, Bachelor of Science, Honours in Geology



"During my co-op with Mining Matters, a standout moment was the trip to Cambridge Bay and Kugluktuk, NU, to deliver *Robotics Rocks!* The community night left a lasting impression, because 15 elders were in attendance. It was a pleasure to connect with them, hearing their stories and perspectives. They enjoyed our soapstone carving and amethyst jewellery-making sessions. One of the elders, a gifted artist, etched a beautiful

muskox onto the metal sheets during our activity *Making with Metal*. This co-op experience not only enriched me personally, but also developed my skills in adaptability, patience, critical thinking, communication, and respect."

Ty Kaloczi

Winter 2023 Co-op Student, Education and Outreach Programs
University of Ottawa, Bachelor of Applied Science Candidate, Chemical Engineering and Computing Technology



"One of the most profound opportunities I received through my co-op term at Mining Matters was the chance to learn about Inuit culture and travel to Salluit, QC, a northern Inuit village to deliver a program for youth. Very few people travel to northern Canada where they can experience rich and important parts of our Nation's cultural tapestry. I was also fortunate to develop my network within

Mining Matters and their industry partners. This position gave me better insight into the mining industry, which has been integral to my understanding of future career opportunities."

Sarah Rab

Fall 2022 Co-op Student, Education and Outreach Programs
University of Waterloo, Bachelor of Science Candidate, Environmental Science with Geoscience Specialization



"As a Graduate Intern with Mining Matters, I have had the opportunity to work on a variety of projects and programs that have allowed me to experience different parts of Canada and expand my skill set. In this position, I have travelled to remote communities in Ontario, Quebec, Manitoba, and Nunavut and facilitated programs for youth. I was able to teach about rocks and minerals, the mining industry, engineering, sustainability and robotics. One of the most rewarding programs on this internship was the ability to work with youth in the Outland Youth Employment Program discussing Canada's critical minerals. We were able to have important conversations about leadership and personal, or environmental impacts that they could have as they move through the various stages of life. Being able to work with youth and listen and learn from them just as much as we were teaching them was an incredibly rewarding experience. I have been able to use my previous summer camp experience to implement new activities and begin the development of more accessible materials, which has been really fulfilling. Being able to see the impact that these new materials have on the youths' understanding of the content has been amazing. I have worked on projects such as the development of a virtual escape room,

GEMS Kits distributions in Nova Scotia, the development of new robotics activities, and delivery outreach programs. I gained and enhanced my communication, teamwork, leadership, design, planning, and organization skills during this internship through the various projects that I contributed to. I am grateful for the opportunity to have worked with so many people within the organization, but also within the contacts that I made throughout this internship."

Chelsea Renaud

2022-2023 Graduate Intern, Education and Outreach Programs
Acadia University, Bachelor of Science and Master of Science Candidate, Environmental Science

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We could not achieve our goals without you! We are deeply grateful to the corporations, organizations, governments, communities and individuals listed on the following pages for their generous support.

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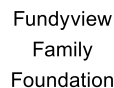
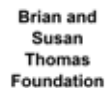
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Ontario Ministry of Mines
Ontario Stone, Sand and
Gravel Association
Ontario Tech University
Pablo Bazan
Printbrain Inc.
Quartermain Earth Science Centre
Québec Precious Metals Corp.
Queen's University
Rami Abou-Shamalah
RBC Dominion Securities
Rebecca Lord
Redpath Museum
Rideauview Contracts
Rilea Kynock
Ripley's Aquarium of Canada
Rob Millard
Rod Stone
Royal Ontario Museum
Saskatchewan Mining Association
Science Literacy Week
SenseTech Solutions
Silver Birch Centre
Simon Fraser University,
Department of Earth Science
Sudbury INO (Glencore)
Superior Gems and Jewellery
The Occurrence
Tim Chadwick
Toronto District School Board
University of Saskatchewan
University of Toronto,
Department of Earth Sciences
University of Toronto, Lassonde
Institute of Mining
University of Waterloo Earth
Sciences Museum
Upper Canada Stone
Western University
Women in Mining
Central America
Yukon Women in Mining

Contributions were received in our 2022-2023 fiscal year. Every effort has been made to ensure the accuracy of this list. If an error or omission has been made, please accept our sincere apologies and contact us in order to correct.



IN MEMORY OF Donald Bubar

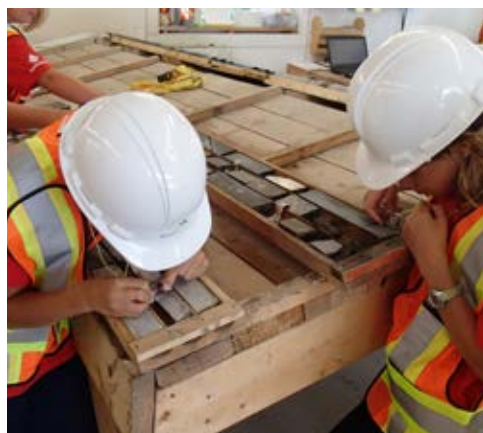
It is with heavy hearts that we announce the passing of our esteemed board member, Donald Bubar.

Don's dedication to advancing geoscience education in Canada, vision for increased participation by First Nations in the minerals industry, and commitment to raising awareness about the crucial role minerals and metals play in modern society were a source of inspiration. His guidance and expertise have helped shape the direction of Mining Matters. We are grateful for his wisdom and support.

We sincerely appreciate the generosity of individuals and corporations for their in memoriam donations in honour of Don. These contributions stand as a meaningful tribute to his legacy and the significant impact he made on our organization and the minerals industry as a whole.

As we mourn the loss of a dear colleague and friend, we extend our deepest condolences to Don's family.

In Memoriam,
The Board and Staff of Mining Matters





How to Donate

Mining Matters is grateful for the contributions of many loyal supporters who have made our goals a reality. Your donation makes a difference! It provides the foundation for our important work and is critical to our ongoing vision of bringing Earth science to life.

As a charitable organization, Mining Matters is able to develop and deliver its programs due to generous financial sponsorship, donations and in-kind contributions from the mineral and aggregate industries, individuals, foundations, corporations and governments.

We invite new supporters to join our cause and current supporters to continue so that we may carry on providing current information about the importance of rocks, minerals, metals and mining in everyday life, and about the diverse career opportunities available in the minerals industry to students, educators and the public.

A charitable receipt will be issued for contributions of \$25 and greater. For more information or to donate, please contact mfraser@miningmatters.ca

Donating Cash

Cash donations to Mining Matters are always welcome and are eligible for the Charitable Donation Tax Credit (CDTC). In addition, for individuals who have not donated previously to charities, there is the First Time Donor's Super Credit (FDSC). This applies to cash donations, not contributing shares. There are also provincial tax credits, which vary across the provinces. Donate online today at MiningMatters.ca.

Donating Shares

Donating shares to Mining Matters may be of interest due to the considerable tax benefits that can be realized. The elimination of capital gains on stocks, bonds and mutual funds means that a contribution results in a tax receipt equal to the fair market value of your gift. Rather than being subject to tax on 50 per cent of the gains for shares sold during your lifetime, accrued capital gains on donated shares are exempt from taxes.

To learn more, please contact Durham Sims, Mining Matters Investment Advisor at RBC Dominion Securities at 416-842-3086, 800-561-4468 or durham.sims@rbc.com. Mr. Sims serves in a volunteer capacity with Mining Matters.

Planned Giving

Mining Matters accepts planned gifts. These gifts enable individuals to make larger donations than they could make from traditional methods.

- Bequests and Wills: leave a piece of property, securities, cash or percentage of your estate.
- Charitable Remainder Trust: irrevocably make a gift through a trust agreement.
- Endowment Fund: provides long-term support. The principal remains invested; only the income is spent.
- Life Insurance: designate Mining Matters as the beneficiary on a new or existing policy or transfer the ownership of your policy to Mining Matters directly with a pledge to pay the premiums each year.
- RRSPs/RRIFs: name Mining Matters as the direct beneficiary of your RRSP/RRIF assets.
- Securities: donate bonds, mutual funds, stocks or other types of securities.

When considering a Planned Gift, Mining Matters recommends that you contact your professional advisor so that your legacy gift is tailored to your circumstances.



ABOUT MINING MATTERS

Mining Matters is a national charitable organization dedicated to educating young people to develop knowledge and awareness of Earth sciences, the minerals industry and their roles in society. We provide current information about rocks, minerals, metals, mining and the diverse career opportunities available in the minerals industry. Mining Matters offers educational resources that meet provincial and territorial curriculum expectations, created by educators and Earth science experts.

Mining Matters has reached an estimated 860,000 teachers, students and members of the public since inception in 1994.

Our core educational programs are:

Teacher Training and School Programs

Bringing Earth science to life for students and teachers in classrooms and online across Canada

Indigenous Communities Education and Outreach Programs

Reaching Indigenous youth through community partnerships.

Outreach Programs

Developing an awareness of the minerals industry and sparking interest in Earth science learning in people of all ages.

Partnership Programs

Building partnerships with museums, universities, libraries, STEM organizations, communities and industry professionals to reach people in all regions of the country.



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Instructor, Education and Outreach Programs

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Matteo Clemente

Binta Goodridge

Ty Kaloczi

Sarah Rab

Hastings Saunders

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