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Welcome Back to School!

We hope that your summer has been restful and that you and your loved ones are staying healthy and happy during these challenging times. Here at *MineralsEd* we have been busy creating and adapting our materials to focus on online and virtual resources to better meet your needs during this school year. We encourage you to reach out to us and let us know what types of resources you would like to see to help you teach Earth Science, mineral resources, and mining in the year to come.

MineralsEd is happy to once again be able to offer a number of our popular **Pro-D programs** this fall, as both **virtual** and **in-person** events. We will be hosting a **virtual Grade 4/5 Resource Unit Workshop**, a **virtual field trip** exploring the *Sea to Sky region*, and two limited enrollment **in-person field trips** exploring the *geology of Stanley Park* and *gold panning in Kamloops* in addition to our many new online virtual resources. Registration for the in-person events is significantly limited in order to adhere to safe social distancing practices, so make sure to register early.

Virtual Classroom Workshops

Is teaching about rocks and minerals or mining difficult because you lack great samples or background? Besides our teacher workshops and field trips (Page 2), MineralsEd is now offering virtual student workshops.

Our *Junior Geologist* virtual workshop for **intermediate students** provides an integrated learning experience for Grade 4-5 students. We are offering several different versions of the workshop so you can tailor the workshop to your curriculum. Topics covered include: • the rock cycle • rock properties as clues to how they form • minerals and their properties as clues to what they are and how they are used • BC's mineral resources • the mining industry in BC and Canada.



The workshop includes a live **1-1.5 hour interactive virtual presentation** by one of our experienced partner teachers, as well as access to a number of additional classroom activities, and a full class set of samples for use during the workshop. The cost is \$5/student, minimum \$120/class. Time slots and materials are limited and on a first-come, first-served basis so make sure to book early. For more information and to book a workshop visit our website: <http://bit.ly/virtualJrGeo>.

By teachers, for teachers.

MineralsEd Fall Pro-D Events

VIRTUAL INSERVICE WORKSHOPS

Grade 4-5: BC's Mineral Resources and Mining FRIDAY, OCTOBER 23, PROVINCIAL PRO-D DAY

MineralsEd and will be offering our [4/5 Integrated Teacher Resource Unit workshop](#) virtually for the very first time. Rocks, minerals and mining are woven together with core curriculum competencies in this comprehensive unit. They are introduced to rocks and minerals, the rock cycle, BC's mining communities, how ore deposits are discovered and mined, how minerals and metals are used, mining careers, and mining and the environment. Presented by *MineralsEd* partner-teacher Andi Eisler.

Priority will be given to teachers in rural and remote communities who have not attended the workshop before. Register through Eventbrite <https://4-5integratedresourceunit.eventbrite.ca> before October 16.

MINERALSED Virtual Resources

MineralsEd is now offering a variety of virtual resources for teachers to use in their classrooms. These videos are appropriate or all grade levels and are a great supplement to class that is learning about earth science and mining.

Mining Month Video Series:

<https://bit.ly/MMvideoseris>

Learn about how geology and mining effect the Vancouver area in this series of videos and accompanying quizzes. Produced in partnership with AMEBC, BelowBC, and The Port of Vancouver.

Rocks and Dirt Video & Quiz:

<http://bit.ly/RocksDirt>

Explore the life cycle of a mine from initial discovery all the way through reclamation.

Jr. Geologist Introduction Tutorial & Quiz:

<http://bit.ly/JrGeoQuiz>

This fun and interactive quiz will help students to better understand the three main rock types, the rock cycle, and minerals in our everyday life.

FIELD TRIPS

Stanley Park GeoTour In-person Field Trip FRIDAY, OCTOBER 23, PROVINCIAL PRO-D DAY

Join *MineralsEd* and geologist Dr. Brian McNulty for a walk through beautiful [Stanley Park](#), Vancouver, to explore the geological history and formations of the Stanley Park area. During this 3-hour guided tour participants will look for and examine evidence of rock-forming processes, surface processes, glaciation, and tectonic history of the area in an interactive and easy to understand way. This workshop is intended to provide teachers with the resources and know-how to conduct their own in-person or virtual Stanley Park GeoTour with their students, and teachers will be provided with a resource kit of relevant materials at the end of the field trip.

Participants will be responsible for their own transportation to/from Stanley Park. In order to maintain adequate social distance this field trip is limited to 8 participants, so register early! Register through Eventbrite <https://stanleyparkgeotour.eventbrite.ca> before October 16.

IN DEVELOPMENT: K-3 Resource Guide

Mining and geoscience isn't just for older students! There are many fun and engaging way to introduce younger students to the foundational concepts behind mineral resources and earth sciences.

MineralsEd is compiling a Resource Guide to help K-3 teachers find the most relevant activities, videos, and other resources for their classes. Whether you are just starting out or have been teaching for years, our new guide will provide you with the foundation you need to bring mining into your classroom.

Find the K-3 Resource Guide here: <http://bit.ly/K-3resources>

Have a suggestion for something to add? *Let us know!*

MineralsEd Fall Pro-D Events

FIELD TRIPS

Kamloops Gold Panning In-person Field Trip FRIDAY, OCTOBER 23, PROVINCIAL PRO-D DAY, KAMLOOPS, BC

MineralsEd and *Yukon Dan* are excited to present a unique field trip opportunity for Kamloops-area teachers this year. This field trip will explore the history and importance of placer mining in British Columbia and how it relates to the local geology of the area. Participants will spend the day **gold panning in Tranquille Creek**, a historic placer mining area, and will be supplied with a resource kit and materials related to the local geology and the impact the gold rush had on British Columbia. *Yukon Dan Moore* is a world champion gold panner who presents a one-of-a-kind, gold panning experience. His workshop supports science and social studies relating to Earth Science, geology, natural resources, the history of BC, and the history of Canada.

Participants will be responsible for their own transportation to/from the start location in Kamloops, BC. In order to maintain adequate social distance this field trip is limited to 12 participants, so register early! Register through Eventbrite <https://kamloopsgoldpanning.eventbrite.ca> before October 16.

Sea to Sky GeoTour Virtual Field Trip FRIDAY, OCTOBER 23, PROVINCIAL PRO-D DAY

MineralsEd is partnering with Douglas College faculty member Dr. Derek Turner to deliver a virtual tour of the beautiful **Sea to Sky region** of southwest British Columbia. Using Google Maps participants will visit various stops along the Sea to Sky highway from Vancouver to Whistler to explore and discuss glacial landforms, volcanoes, rockfall and debris flow hazards, and more. All participants will receive a support package containing materials on the geology and history of the Sea to Sky region that will give them the resources to present this GeoTour to their own classes. Participants can take part in this field trip from any location, only a computer and reliable internet connection are required, making this an ideal field trip for teachers from all parts of the province.

Register through Eventbrite <https://seatoskygeotour.eventbrite.ca> before October 16.

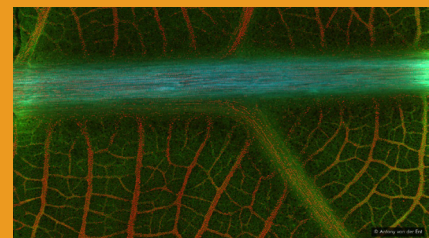
MINING IN THE NEWS: "GREEN" MINING

Sampling soil and extracting rocks aren't the only way to find and mine mineral deposits! Even back in ancient times, people recognized that certain types of plants are good indicators of hidden treasures below, but recently, companies and researchers have been studying ways to use this to help us discover and extract mineral resources.

Plants receive all of their nutrients from the water and soil. When there is an abundance of metals in the soil due to the presence of a nearby mineral deposit, the plant will absorb some of these metal into its roots, leaves, and flowers. Certain plants, called hyperaccumulators, will actually preferentially absorb certain metals into their tissues, such that they will have a higher concentration of metals than the surrounding plants and soils.



Material from hyperaccumulators can be tested for metal content to help exploration geologists find deeply buried minerals, and they can even be planted near currently operating or former mine sites to help remediate the land and remove toxic metals from the soils. In fact, some plants have recently been discovered in a remote mining district in Indonesia to be such good hyperaccumulators that they actually "bleed" nickel-rich sap!



Involve Your Students

MineralsEd Online Store

Visit the MineralsEd [website](#) to view all of the resources available for purchase or to order your free sample pack of MineralsEd materials! You can also view our [Virtual Library](#) for hundreds of online resources for geology, mineral resources, and mining content that will support your teaching for all grade levels. Our [YouTube](#) channel also has a large collection of videos for your use.



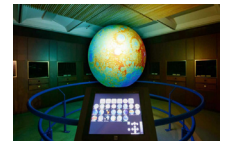
Britannia Mine Museum

[Britannia Mine Museum](#) is a STEM Education Partner, providing unique, entertaining and memorable curriculum-based educational experiences that consider the relevance and impact of resource management and geologic exploration. Students of all ages will have a safe, enjoyable and engaging experience. Enhanced sanitation, smaller groups and social distancing measures are in place to keep everyone safe. Not ready for an onsite field-trip quite yet? Don't worry we have other opportunities to engage your students. Starting later in the fall we will be offering online sessions with our education team. We will also be offering sessions for homeschool groups/bubbles to be able to come and visit us and enhance their learning. To book or for up to date information visit our website: <https://www.britanniaminemuseum.ca/pages/school-field-trips>



Pacific Museum of Earth

Looking for a fun way for your class to explore the wonders of our dynamic Earth, right from the comfort of your classroom? The [Pacific Museum of Earth](#) at UBC is offering [virtual guided](#) and self-guided tours of the museum for all ages that will take you through the history of life on Earth, Earth's treasures, and natural disasters. To book a guided tour for your class or learn more about the virtual resources the PME has to offer, visit their website: <https://pme.ubc.ca/learn/youth/virtual-museum-tour/>



H.R. MacMillan Space Centre

Outer space and the rocks beneath our feet have a lot more in common than you might think! The [H.R. MacMillan Space Centre](#) is offering redeveloped virtual school programming that explores space, the history of the universe, the formation of Earth and more! The new virtual programming includes access to classroom-ready learning playlists and a live online lesson with Space Centre staff. For more information, and to book your virtual program, visit their website: <https://www.spacecentre.ca/>



Port of Vancouver

[Port of Vancouver](#) offers a free school program designed to support Grades 4-6. Students learn how their lives are connected to the port and observe the working port around Burrard Inlet. This program can be delivered as either a live virtual 45 or 60-minutes field trip or as eight pre-recorded segments. To book, call 604.665.9038 or fill out their online form: portvancouver.com/schoolprogram



Travel Subsidies

Travel subsidies are available from *MineralsEd* for class field trips to geoscience or mining destinations. Complete our subsidy application form or find out more information on our website at: <https://tinyurl.com/ybmtuorx>.

