

## In This Issue...

- Welcome Back!
- MineralsEd Virtual Workshops
- MineralsEd Fall Pro-D Events
- Mining in the News
- Field Trips
- FREE MineralsEd Resources

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## Welcome Back to School!

Welcome back to another school year! We hope that you enjoyed your summer break while managing to stay cool and safe. At **MineralsEd**, we have been busy updating our teacher resource units and restocking our inventory of rocks and minerals and are looking forward to returning to in-person workshops this fall!

We have a lot of exciting programming for the 2022-2023 school year, including the launch of our first Indigenous-focused resource unit, and the return of our popular Natural Resources Harbour Cruise and the Earth Science Resource Unit. You can count on us to support your units on Earth Science, mineral resources, and mining with our virtual classroom workshops, field trip subsidies, and free online resources!

Explore this Fall edition of **MineralsEd Connections** to learn more and prepare for the year ahead. Sign up for our **Newsletter** for our monthly e-updates!

## MineralsEd Virtual Classroom Workshops

**MineralsEd** has developed virtual resources to so that we can provide learning opportunities to classrooms all across BC!

### Virtual Junior Geologist Workshop

In this 90-minute virtual workshop, students will have the chance for hands-on learning as they investigate the physical properties of rocks and minerals. Guided by **MineralsEd** Partner-Teachers, students will learn about the roles of minerals in everyday life, mineral resources in B.C, the rock cycle, and mineral identification. Students will also be able to practice making observations, predictions, and experiments - all part of the scientific process! This workshop is perfect for classes learning about Earth Science, rocks and mineral resources, and mining. **Book your workshop here:** <https://bit.ly/virtualJrGeo>

### Virtual Geoscientist in the Classroom Guest Speaker

Connect your classroom with a real-life geoscientist! In this **FREE** workshop, **MineralsEd** Volunteer Geoscientists virtually visit classrooms to present on a geoscience topic of the educator's choice, followed by a Q&A session. This is a great opportunity for classes learning about Earth Science, rocks and minerals, or careers to get first-hand knowledge from a professional geoscientist. Our volunteers are passionate and have a diverse set of knowledge and experiences. **Book your geoscientist here:** <https://bit.ly/virtualGitC>

By Teachers, For Teachers

## MineralsEd Fall Pro-D Day Events: October 21, 2022

**MineralsEd** will be offering a variety of in-person workshops and field trips for the **Provincial Pro-D Day** on **Friday, October 21, 2022** (page 2-3). All workshops will be taking place at Pinetree Secondary School in Coquitlam, BC.

At the heart of the **MineralsEd** is a suite of classroom-ready geoscience Resource Units for grades K-12, written and developed by our Partner-Teachers to support B.C. curriculum. Each Resource Unit includes a teacher's binder with background information and classroom activities, support materials (USB, poster, activity books, bookmarks, and more), and rock and mineral samples. You can browse all of the **MineralsEd** Resource Units here: <https://bit.ly/MEResourceUnits>

### Intermediate Integrated Resource Unit on Mining

This Resource Unit is written with a thematic approach to mining and Earth Science, designed for (but not limited to) the grade 5 curriculum and integrating learning across the curriculum subjects. The **MineralsEd's Rock Star 101** presentation will introduce participants to **mining and geology in B.C, rocks and minerals, and the rock cycle**. Teachers will have the opportunity to get hands-on by exploring their **MineralsEd Rocks and Minerals Kit** and practicing their rock identification. Afterward, participants will review lesson plans and activities, whose topics range from: the **history and future of mining, mining and the environment, uses of rocks and minerals, mining careers**, and more!

Presented by **MineralsEd** Program Coordinator Sarah Jackson-Brown and Partner-Teacher Andi Eisler.

**Registration (\$50):** <https://bit.ly/ME-IIRU-Oct2022>

### Earth Science Resource Unit

This Resource Unit provides a collection of engaging and instructive activities and demonstrations to help introduce the **fundamentals of geology, plate tectonics, and history of the Earth** through creative learning activities. Units in the binder address essential topics like **rocks and minerals, the rock cycle, structure of Earth, volcanoes and earthquakes**, plus unique topics like **Famous Rocks and BC geology**. Teachers will be treated to various demonstrations and get hands-on with a **MineralsEd Rocks and Minerals Kit** and will be able start using these resources in their classrooms immediately. Originally designed to address Grade 7-8 Earth Science curriculum, this comprehensive unit can be applied to both intermediate and secondary grade levels.

Presented by **MineralsEd** Partner-Teacher Kerry Lockwood.

**Registration (\$50):** <https://bit.ly/ME-ESRU-Oct2022>

## NEW RESOURCE UNIT - EARLY INDIGENOUS PEOPLE'S USE OF ROCKS AND MINERALS

**MineralsEd** is excited to be debuting our newest Resource Unit **Early Indigenous Uses of Rocks and Minerals**. This is composed of six stations that explore different methods of how early indigenous people utilized rocks and minerals. **Practice flaking your own stone tools, painting with mineral pigments, and soap carving!**

Developed as an inquiry-based student challenge to accompany the B.C. Intermediate-level curriculum, this resource is **multi-disciplinary**, enabling teachers to incorporate core and curricular competencies from **Science, Social Studies, English Language Arts, Arts Education, and Applied Design, Skills and Technologies (ADST)**.



Teachers who participate in this Resource Unit will receive a binder with information and classroom activities, support materials, and a rock and mineral kit with samples of obsidian, flint, chert, malachite, and more!

Written and presented by **MineralsEd** Partner-Teacher Dale Maingot.

**Registration (\$50):** <https://bit.ly/ME-EIURM-Oct2022>

### Natural Resources in Vancouver Harbour Cruise - Downtown Vancouver

Join **MineralsEd** and members of the **North Shore Waterfront Industrial Association (NSWIA)** for a boat tour of **Vancouver Harbour** to learn about Canada's natural resources and their role in the Canadian and Global economies. Mineral concentrates, sulphur by-product, potash, wood products, grains and coal produced in BC and other parts of Canada are exported in bulk from the **Port of Vancouver** to markets around the globe. They provide the world with raw materials and drive our economy. This half-day cruise will loop around Burrard Inlet for a close look at many of the terminal operations. Terminal representatives will be on board to share their knowledge and expertise about their operation and the natural resources they handle. Register before Oct. 7 to get the Early Bird Discount!

**Registration (Early Bird: \$50, Regular: \$75):**

<https://bit.ly/ME-HC-Oct2022>



### Elkview Coal Mine Field Trip - Sparwood, BC

**MineralsEd** is pleased to partner with **Teck Resources** to offer a Pro-D field trip of their Elkview Mine operation in **Sparwood, BC**. Elkview is one of four metallurgical coal operations in the Elk Valley, producing steelmaking coal and is the first mountain top mine in the world to go autonomous. Elkview produces over **20 million tonnes of metallurgical coal** each year that is shipped out from Vancouver to markets around the world. The visit will include an overview of the history of Elkview, a viewing of a heavy duty shop, overviews of the plant and processing, and visits to two viewpoints overlooking the mine. This is a unique opportunity learn first hand about autonomous vehicles and cutting edge technology in the mining and milling process, waste rock management, markets, and the mine's economic impact on the region.

**Registration (\$30):** <https://bit.ly/ME-Elkview-Oct2022>



## New Classroom Workshop - Secondary Social Studies: Mining in BC

Complex issues such as mining are better understood when examined from all angles and discussed. Written and designed for secondary grade levels for Social Studies, Geography, Earth Science, and Geology curriculums, this workshop will review the process of mineral resource development. Topics include **mineral exploration and mine development, extraction and processing, sustainability and reclamation, economics, and Indigenous perspectives in resource development**. The heart of the unit is a fictional classroom **case study of a proposed mine**, where **students will address the environmental, cultural, and ethical implications associated with mine development in our province**. Once students have gained a basic overview, they are divided into groups that take on the role of a stakeholder in the development of the proposed mine. Research and evaluations are compared through a class discussion period. A consensus is reached once all groups have given their input.

This in-class workshop is presented by author and Partner-Teacher Bruce Kiloh, introducing the various stakeholders and laying the groundwork for the town hall discussion. The workshop includes a resource binder with background information for each step in the mining process along with real life examples and a kit of related materials.

**Book your workshop here (\$50):** <https://bit.ly/ME-MiBC>

## Field Trips

Looking for fun ways for your class to expand your Earth Science units? Consider taking an in-person or virtual field trip to one of the many venues throughout B.C! A full list of *Field Trip Destinations* can be found on our website. We recommend the following:

- **Britannia Mine Museum** – Learn about the mining legacy of Britannia Mine. Pan for gold, explore old mining practices and current uses of minerals, take a picture with the GIANT haul truck, tour the underground tunnel, investigate and mining and the environment in the new TerraLab, and experience the multi-sensory mill show BOOM!
- **Pacific Museum of Earth** – Explore the wonders of our dynamic Earth! Virtual or in-person tours will take you through the history of life on Earth, Earth's treasures, and natural disasters.
- **H.R. MacMillan Space Centre** – Discover space rocks, the history of the universe, and the formation of Earth through a variety of in-person and virtual classroom programs.
- **Port of Vancouver** – Free in-person and virtual classroom workshops for grades 4-6 will teach students how their lives are connected to the Port as Canada's western gateway to over 170 trading countries!



### MineralsEd Field Trip Travel Subsidies

Travel subsidies are available from MineralsEd for class field trips to geoscience or mining destinations. Request your field trip travel subsidy here: <https://bit.ly/METripSubsidy>

## FREE MineralsEd Resources

Visit the **MineralsEd** website to view all the free resources available!

- Order a **FREE MineralsEd Sample Pack** with posters, activity books, bookmarks, and more!
- Request one of our free online quizzes for your classroom: **Junior Geologist Quiz**, or **Rocks and Dirt Video & Quiz**.
- Explore mineral exploration and mining throughout the province by visiting the **MineralsEd** interactive **B.C. Mines Map** or try out our **Virtual Mining Scavenger Hunts**.
- View our **YouTube** channel for a collection of our geoscience videos.



Looking for something else? Try searching our **Virtual Library** with hundreds of resources for your Earth Science units.

We have resources for all things geoscience: Rocks and Minerals, the Rock Cycle, Mining, Geology of B.C., Environmental Science, Climate Change, Layers of the Earth, Plate Tectonics, Earthquakes, Volcanoes, Mars, Fossils, Careers, and more!