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Welcome Back to School!

We hope you had a relaxing summer and are looking forward to the school year ahead. We are pleased to continue providing materials and programs to assist you in teaching topics in Earth Science, mineral resources, and mining.

As we do every Fall, *MineralsEd* will offer several Pro-D programs for teachers: our *Natural Resources in Vancouver Harbour Cruise* and *Rocky Mountain Geotour*, as well as *inservice workshops* for our Grade 4-5 and 7-8 resource units (Page 2). A special *field trip for secondary students* to *Copper Mountain Mine* near Princeton is also on our calendar for October 19. Read on for details and please share the information with your colleagues.

Classroom Workshops and Guest Speakers

Is teaching about rocks and minerals or mining difficult because you lack great samples or background? Besides our teaching kits, MineralsEd's student workshops and guest speaker programs are excellent support.

- *Kids&Rocks* classroom workshop for *primary students* explores the properties of rocks and minerals. Through hands-on enquiry students observe, touch, test, sort and classify, learning through play and developing new Earth Science concepts and vocabulary.

- *Junior Geologist* classroom workshop for *intermediate students* addresses higher level Grade 4-5 science and socials curriculum: • the rock cycle • rock properties as clues to how they form • BC's rock and mineral resources • minerals and their properties as clues to what they are and how they are used.

Both workshops are half day, mornings only, beginning in October. The cost is \$6/student, minimum \$120/class. For more information and to book a workshop visit our website: <https://tinyurl.com/y8836koe>

Ready for school again, geologist and outreach educator, *Patrick McAndless*, aka *Geodude*, will be available as a *guest speaker* beginning in late September. Patrick is an engaging presenter who enjoys sharing his passions for the Earth, science, mining, and personal planning with youth. For more information and to book, visit: <http://bit.ly/2Czldr0>.

By teachers, for teachers.

MineralsEd Fall Pro-D Events

FIELD TRIPS

Natural Resources in Vancouver Harbour Cruise

FRIDAY, OCT. 19, PROVINCIAL PRO-D DAY

MineralsEd and the [North Shore Waterfront Industrial Association](#) members are partnering again to offer a boat tour of Vancouver harbour to learn about Canada's natural resources and the economy. Mineral concentrates, sulphur by-product, potash, wood products, grains and coal, that are 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. Representatives from several terminals will be on board to share their knowledge and expertise about natural resources and the port industry.

5th Annual Harbour Cruise Anniversary registration fee \$25 until Oct. 5, and \$35 fee thereafter. Register through Eventbrite: <https://mineralsed-harbour-cruise-2018.eventbrite.ca>.

Rocky Mountain Geotour (Cranbrook Area)

FRIDAY, OCT. 19, PROVINCIAL PRO-D DAY

MineralsEd is partnering with BC MEMPR Regional Geologist [Fiona Katay](#) and Kootenay fossil collector and Cranbrook History Centre Director [Guy Santucci](#), for a full day geology field trip across the southern Rocky Mountains from Cranbrook to Elko. Outcrop stops will highlight the main geologic elements of the Rocky Mountains in SE BC that record how the rocks formed and how they have been deformed and moved during mountain building.

This is an excellent field experience for everyone who teaches topics in Earth Science at any grade level and wishes to incorporate place-based learning. There will be many opportunities to collect rocks and fossils for your classroom teaching.

Transportation from Cranbrook is provided. Registration fee \$25. Deadline Oct. 5. Register through Eventbrite: <https://rocky-mountain-geotour.eventbrite.ca>

MINERALSED at myPITA CONFERENCE: October 19, North Delta Secondary

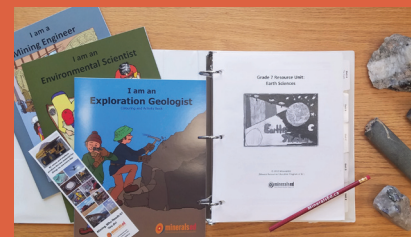
MineralsEd will be presenting workshops for our comprehensive teaching kits: **Grade 4-5 Integrated Resource Unit on Mining** and **Grade 7/8 Resource Unit: Earth Science**. Registration is through myPITA.

Grade 4-5: BC's Mineral Resources and Mining

Rocks, minerals and mining are woven together in this unit that integrates learning in many subject areas. Students examine mining in the past, present and future. 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.

Grade 7-8: Earth Science

This teaching resource provides a collection of engaging and instructive activities and demonstrations to help teach students the fundamentals of geology and to introduce plate tectonics and history of the Earth. Units in the binder address essential topics like minerals, the three types of rocks, structure of Earth, volcanoes and earthquakes, plus unique topics, like BC geology and Famous Rocks (global). Presented by partner-teacher Kerry Lockwood.



Career Education Support

Copper Mountain Mine Student Field Trip

FRIDAY, OCT. 19, PROVINCIAL PRO-D DAY

Recognizing the need for students to have first-hand experience to understand how modern mining works and what career options are available in the minerals industry, *MineralsEd* is partnering with **Copper Mountain Mine** near Princeton to bring sr. secondary students from Lower Mainland and Princeton area schools to the mine.

Copper Mountain is a very large, open pit operation that employs more than 400 people in a variety of roles from equipment operators and trades, to scientists, engineers and technicians of many stripes, as well as a host of business related roles. This is a great opportunity to learn about the mining process and to see how a student's career interests may tie into the minerals industry.

Students must be nominated by their teachers. More detailed information, including the registration procedure and link are found on the *MineralsEd* website:

<https://tinyurl.com/y6u2v2jh>.

Registration fee \$20. Deadline: Friday, Oct. 5.

Web-based Resources

MineralsEd YouTube Channel

MineralsEd's **YouTube** channel has a wide variety of videos to support teachers in the classroom. Whether you are looking to bolster your in-class unit or gather more background knowledge yourself--don't miss out on the value that visual aids can bring to learning about the fundamentals of geology, the types and scale of mining operations, and what careers are available in the industry.

<https://tinyurl.com/ycvovvor>.

Virtual Library on MineralsEd.ca

Our **Virtual Library** is an exciting feature that makes accessible a host of accurate and useful web-based education resources, vetted by us, and organized into easily navigable tables. The **Virtual Library** includes resources that address topics in Earth Sciences, Mineral Resources, Mining, Environment and Sustainability, and Career Education. Nearly all of the video resources are also linked to our new **YouTube channel**, and here you will also find *MineralsEd's* resource unit binders (secondary level) and geotour guides available free by download.

MINING IN THE NEWS: Silvertip Mine

The latest mine to go into operation in BC is Silvertip. Chicago-based, Coeur Mining announced commissioning of the mill and production at this high-grade mine earlier this Spring.

Silvertip Mine is an underground silver, zinc and lead operation located in the Cassiar Mountains (Omineca Belt) 90 kilometres southwest of Watson Lake, YT, only 16 km south of the YT-BC border.

The Silvertip deposit was discovered in the 1950s. Exploration to evaluate and eventually develop the deposit was ongoing through many owners from the 1960s to the present. The ore body consists of five metalliferous zones within mid-Paleozoic (McDame Group) limestone; the key metallic minerals are pyrite, pyrrhotite, sphalerite, galena and sulfosalt-sulphides. Current resource estimates are 2.35 million tonnes at 352 g/t Ag, 6.73% Pb and 9.41% Zn.

Silvertip Mine currently employs ~165 people on site.



Involve Your Students

Britannia Mine Museum

Britannia Mine Museum offers informative and entertaining guided tours for school groups as part of their finely crafted K-12 educational program. Open year round, this year they are offering a special discounted rate in Dec/Jan/ Feb. For more information, and to book a tour, visit their website: <http://www.britanniaminemuseum.ca/schools>



H.R. MacMillan Space Centre

The H.R. MacMillan Space Centre, located in Kitsilano, offers a wide array of options for Grade 5 field trips that fit well with MineralsEd's Grade 4/5 Resource Unit. Topics to explore include the rock cycle, machinery, Earth's materials, and sustainability practices. For more information, and to book a tour, visit their website: <https://www.spacecentre.ca/grade-5-field-trips>



WHERE Challenge Contest

What on Earth is your stuff made of? The WHERE Challenge invites youth (ages 9-14) from across the nation to develop projects that feature the non-renewable mineral ingredient(s) of a familiar item, and explain where that product comes from. Contest opens in September; submission deadline March 2019. <http://earthsciencescanada.com/where/>



Port of Vancouver

Port of Vancouver's free school program at their Discovery Centre in Canada Place is designed to support Grades 4-6. Students learn how their lives are connected to the port and observe the working port around Burrard Inlet. To book call 604.665.9038 or review their booking form online. <https://www.portvancouver.com/community/school-program/>



Yukon Dan Gold Panning

Yukon Dan Moore is a world champion gold panner who presents a one-of-a-kind, gold panning workshop in classrooms at all grade levels. Cost: \$6 per student with a minimum charge of \$180 per workshop. To arrange a workshop phone or email Dan directly at 604.948.4941 or gold@yukondan.com



Travel Subsidies

Travel subsidies are available from MineralsEd for class field trips to geoscience or mining destinations and for Yukon Dan workshops. Complete the application on our website at: <https://tinyurl.com/ybmtuorx>.

Switch to e-mail! We will be phasing out the print version of *MineralsEd Connections*. To continue to receive *Connections* electronically as well as our monthly e-updates, request the switch at info@MineralsEd.ca.

