












For more great links go to our Pinterest site: <http://www.pinterest.com/educationsma/>

-  Canadian sites
-  Saskatchewan sites

Building Stone

-  **Tyndall Stone Fact Sheet:** (http://www.gac.ca/publications/factsheets/TyndallStone_e.pdf)

Careers


-  **Career as a Geotechnician:** (<http://www.youtube.com/watch?v=mzUW6goi4mM&feature=related>)
Northland College YouTube Video
-  **Heavy Duty Equipment Operator training:** (<http://www.youtube.com/watch?v=oTSeBXdJ8S0>)
Northland College YouTube Video
-  **Careers in the Mining Industry - B.C.:** (<http://www.mineralsed.ca/s/CareerVideos.asp>)
Links to career videos and information from the BC Mineral Education Program.
-  **Careers in Oil and Gas:** (<http://www.careersinoilandgas.com/>)
Occupational Summaries highlight a variety of unique careers in the oil and gas industry.
-  **Earth Sciences Canada Careers:** (<http://www.earthsciencescanada.com/careers/>)
A fun interactive site with information on careers in earth science and information about academic requirements.
-  **Explore for More Career videos Page:**
(http://www.acareerinmining.ca/en/onlineresources/explore_more_video.asp)
A series of 3 minute career videos showcasing workers in a wide range of mining industry occupations. Videos can be downloaded.
-  **Keewatin Career Development Corporation:** <http://www.kcdc.ca/>: (<http://www.kcdc.ca/>)
Industry Education Council; Career planning; Northern training course videos; and interviews.
-  **Mining New Opportunities video:** (<http://www.oma.on.ca/en/aboutoma/EducationandOutreach.asp>) :
Scroll down to find the video. Available in Cree, English, French, Ojibway, Oji-Cree.
Teacher Resource: <http://www.oma.on.ca/en/aboutoma/resources/OMATeachersGuide.pdf>
-  **Mining Your Future:** (<http://www.miningyourfuture.com/>)
Exploring careers in B.C.'s mining industry. A TV Mini-Series showcasing the diverse career opportunities in the mineral exploration and mining industry. 8 episodes.
-  **Our Community . . . Our Future:** (<http://www.nrcan.gc.ca/mining-materials/aboriginal/bulletin/7825>)
Mining and Aboriginal Communities. Natural Resources Canada:
-  **SaskCareers:** (<https://saskcareers.ca/content/mining>):
Saskatchewan's one-stop-shop for anyone who is planning their future path—education, career and lifestyle. Learn about yourself and your interests, discover career paths, explore education and training and connect with employment opportunities.

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Saskatchewan Mining Association: (<http://www.saskmining.ca/info/Careers/careers.html>)
 Mining in Saskatchewan an Economic Superstar:
 (<http://www.saskmining.ca/video-gallery/Media-Centre/media-gallery-videos.html#top>)



 Fact Sheets: http://www.saskmining.ca/uploads/general_files/24/sma_careers-fact-sheet-2014.pdf

 ORE Magazine: Each issue has a section on Careers/Workforce <http://www.saskmining.ca/news-article/Publications-Resources/PubRes/all/1/2011-03-16-ore-the-official-publication-of-the-saskatchewan-mining-association.html>
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Saskatchewan Youth Apprenticeship Program: (<http://www.saskapprenticeship.ca/designated-trades/>)
 Information about careers in trades associated with the minerals industry.
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The Earth Series Careers: (http://www.mininginmind.ca/highband_main.php)
 The Earth Series project offers information about different careers in the Canadian mining sector. Use this website, which was developed for Aboriginal youth, educators, guidance counselors, and community-based groups, to learn about different types of jobs in this exciting industry. Gr. 7+
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Turn the ideas of today into the realities of tomorrow. (<http://www.apegs.ca/Portal/Sites-Management/FileDownload/DataDownload/1127/CareerFairBooklet/pdf/1/1033>)
 This booklet describes the various disciplines / careers available in engineering and geoscience. An excellent guide for students who are thinking engineering or geoscience may be the career for them but they are not quite sure what discipline to pursue.

Coal

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Coal Association of Canada: (<http://www.coal.ca/coal-kit/>)
 History, facts, and careers in Coal. Five downloadable information modules: Evolution, Economics, Technology, Environment and Sustainability. Gr. 5 – 12.
- Coal: from Energy Kids:** (http://www.eia.doe.gov/kids/energy.cfm?page=coal_home-basics)
 Reference material for students Grade 5+.
- American Coal Association:** (<http://teachcoal.org/for-teachers>)
 Hands-on activities, experiments, lesson plans, and other free resources. Gr. K-12

Diamonds

- Geology.com:** (<http://geology.com/diamond/>)
 links to properties of diamonds, synthetic diamonds, diamonds in space and diamond mining .
- How stuff works- Diamonds:** (<http://science.howstuffworks.com/environmental/earth/geology/diamond.htm>)
 How kimberlites form and the properties of diamonds. A short animation of a kimberlite eruption.
- 
Planet Earth: Earth Sciences For Society. http://www.gac.ca/PopularGeoscience/factsheets/Diamonds_e.pdf
 Diamonds fact sheet.
- 
Shore Gold: (<http://www.shoregold.com/>)
Mine simulation video: (http://www.shoregold.com/_resources/videos/master_scene.html)
 Video shows the mining operation from the digging of the open pit to the processing of the diamonds.

Earth

- American Museum of Natural History – Earth Ology:** (<http://www.amnh.org/explore/ology/earth>)
 Interactive site, quizzes, experiments, information, and interviews.
- Core Knowledge Lesson Plans – The Earth:**
 (http://www.coreknowledge.org/mimik/mimik_live_data/view.php?id=194&sp_id=4&q=earth&type=site)
 Saskatchewan Mining Association Education Outreach Suite 1500 – 2002 Victoria Ave., Regina, SK S4P 0R7
 Phone: 306-229-4062 e-mail: education@saskmining.ca www.saskmining.com

Complete units related to the study of the earth. Multiple grades.

Digital Library for Earth Education System – The Earth:

(<http://www.dlese.org/library/query.do?q=earth&s=0&gr=07&gr=04&gr=05&gr=02&re=0c&re=0d&re=0g&re=0j&re=0r&re=0k>)

Lesson plans, field trips guides, computer activities, experiments.

Earth History: (<http://www.scotese.com/earth.htm>)

Maps showing where the continents were in the past?

Evolution by John Kyrk: (<http://www.johnkyrk.com/evolution.html>) Animation unraveling Earth history from The Big

Bang to Today: timeline of evolution; a chronicle of the universe, the solar system, and the development of life on Earth

Geo 4 Kids Geology for Kids: (<http://www.kidsgeo.com/geology-for-kids/0020-crust-mantel-core.php>)

An online text with information and diagrams on soil, the Earth's crust, core, and erosion. Grade 5+.

Smithsonian National Museum of Natural History – Geologic Time (<http://paleobiology.si.edu/geotime/main/>)

Detailed information on the physical and biological history of the Earth through all of geologic time. Information about Dating Methods, Earth Processes, and Life Processes.

Energy

Adventures in Energy: (<http://www.adventuresinenergy.org/index.html>)

Interactive overview of where oil and gas come from, exploration using cutting-edge technologies and environmental practices, products made from oil and natural gas. Gr. 9+.

AGIWeb- Virtual Oil Well: (<http://www.earthscienceworld.org/games/index.html>)

Interactive game: Find an oil well before the money runs out. Gr. 9+.

Energy Kid's Page: (<http://www.eia.doe.gov/kids/>)

Find out how humans use energy through quizzes and fun facts. Gr. 3-8.

Coal Fired Power Station Queensland Resources Council (Australian):

(http://www.oresomeresources.com/media/flash/interactives/coal_fired_power_station/)

Interactive site demonstrating how energy is made from coal.

Environmental Assessment

 **Environmental Assessment in Saskatchewan** (high level overview PDF)

(<http://www.environment.gov.sk.ca/EnvironmentalAssessmentProcessGuidelines>)

 **Saskatchewan Environmental Assessment Process Map:**

(<http://www.environment.gov.sk.ca/EAFLOWProcessMap>)

Gold

31 Incredible Facts About Gold Infographic:

What Makes gold So Valuable: (http://www.seeker.com/what-makes-gold-so-valuable-1792697932.html?fb_comment_id=899767166727071_899890793381375#f3737619634e53)

Video and text information.

Minerals in Health Science

[Areva Med Nuclear Therapy](http://us.aveva.com/EN/home-1791/aveva-med-nuclear-therapy.html) - <http://us.aveva.com/EN/home-1791/aveva-med-nuclear-therapy.html>

AREVA Med has developed new processes for producing high purity **lead-212** (^{212}Pb), a rare radioactive isotope that is currently at the heart of promising nuclear medicine research. This **rare isotope** is used in alpha radioimmunotherapy, a powerful anticancer therapy which offers great potential for combating certain very aggressive types of cancer.

Radioisotopes in Medicine:

(<http://www.world-nuclear.org/info/Non-Power-Nuclear-Applications/Radioisotopes/Radioisotopes-in-Medicine/>)

Minerals Industry/Mining

Dig into Mining: (<http://www.digintomining.com/>)

An interactive educational program for students that uncovers the use of metals such as copper in our everyday life, and provides students a deeper understanding of today's hard rock mining industry. Virtual field trip, and interactive digital learning tools. Gr. 6 – 8.

Green Mining Initiative: (<http://www.nrcan.gc.ca/minerals-metals/technology/4473>)

The Green Mining Initiative, led by Natural Resources Canada, in close partnership with provincial/territorial governments, industry, academia, NGOs and other interested stakeholders, aims to improve the mining sector's environmental performance and create green technology opportunities. Gr. 7+

Ground Rules, lesson plans for mining: (<https://mining.cat.com/groundrules>)

A documentary video created by Caterpillar and Science North. It follows the development of new and operating mines as geologists, engineers and mine managers tackle complex problems. Lessons cover the topics of geology, mining, mining processes, ore processing and minerals in everyday life. The video is downloadable in English and French. Lesson plans to accompany the *Ground Rules* film. Gr. 5-12.

Mining Association of Canada: (<http://mining.ca/>) Reference material. Gr. 7+

Mining Sequence: (<http://www.nrcan.gc.ca/minerals-metals/aboriginal/3890>)

Links to a video which can be ordered free of charge and a downloadable PDF file. Topics include: Mineral Exploration, Mine Development, Mine Operation and Mine closure and a list of websites related to mining in Canada.

Minerals and their Uses: Science Views – Geology (<http://scienceviews.com/geology/minerals.html>)

Minerals from A- Z. Also information on fossils and general geology.

Ontario Mining Association: Mining New Opportunities Video:

(<http://www.youtube.com/playlist?list=PL4pjpWSPmnwu1sZ2vfwLojsBa5WNgSxFq>)

A free downloadable video about the mineral industry and careers. A "Teacher's Resource and Speaker's Guide." This video is produced in five languages - Cree, Oji-Cree, Ojibway, English and French.

Oresome Froth Interactive:

(http://www.oresomerresources.com/media/flash/interactives/oresome_froth/oresome.html)

Students become 'virtual metallurgists' and undertake on the job training, conduct experiments, alter variables and examine the consequences, assess the cost and environmental impact of their actions and interact with on-site staff to discover more about a range of careers. Also suitable for chemistry teachers to use for demonstrating the importance of chemistry and highlighting job opportunities in the minerals industry. Gr. 9+

Prospectors and Developers Association of Canada Mining Matters:




(<http://www.pdac.ca/mining-matters/resources>)

Many resources for teachers, including posters, fact sheets, and classroom activities. Gr. 3+.


The Life Cycle of a Mineral Deposit: (<http://pubs.usgs.gov/gip/2005/17/>)

A teacher's guide for hands-on mineral education activities. includes basic geologic concepts; the processes of finding, identifying, and extracting the resources from a mineral deposit; and the uses of minerals. Gr. 5-8.

Potash

-  **[Rick Mercer goes Underground at the Allan Potash Mine](http://www.youtube.com/watch?v=qA64vYy9ZK0&NR=1)**: YouTube video:
(<http://www.youtube.com/watch?v=qA64vYy9ZK0&NR=1>)
Virtual fieldtrip underground. Six minutes long. Gr. 7+
-  **[Downunder: a mini mine tour](http://www.potashcorp.com/media/POT_Mini_Mine_Tour_brochure.pdf)** by PotashCorp provides information on potash mining:
(http://www.potashcorp.com/media/POT_Mini_Mine_Tour_brochure.pdf)
-  **[Potash 101](http://www.youtube.com/watch?v=ULLLmm6cCJ8)**: by Mosaic Potash Company (<http://www.youtube.com/watch?v=ULLLmm6cCJ8>)
Information about Mosaic Potash company, underground tour of a potash mine, mining and processing of potash ore. Gr. 7+

Rocks and Minerals

- [Interactives: Dynamic Earth](http://www.learner.org/interactives/dynamicearth/index.html)**: (<http://www.learner.org/interactives/dynamicearth/index.html>)
Interactive website. Learn about earth's tectonic plates and their movements, and discover how mountains, volcanoes, and earthquakes are formed. Gr. 5+
- [Interactives: Rock Cycle](http://www.learner.org/interactives/rockcycle/index.html)**: (<http://www.learner.org/interactives/rockcycle/index.html>)
Interactive web site. Create a rock collection as you learn about the three main types of rock, find out how to tell the different rock types apart, and see how rocks change from one type into another! Gr. 5+
- [Mineral Information Institute](http://www.mii.org/)**: (<http://www.mii.org/>)
Reference material for teachers and students.
- [Mineral Resources: Out of the Ground . . . Into our Daily Lives](http://geopubs.wr.usgs.gov/open-file/of01-360/)**: (<http://geopubs.wr.usgs.gov/open-file/of01-360/>)
A poster showing the common usage of mineral resources in our homes, offices, and equipment we use daily.
-  **[Popular Geoscience Fact Sheets](http://www.gac.ca/publications/factsheets1.html)**: (<http://www.gac.ca/publications/factsheets1.html>)
Fact sheets on rocks and minerals.

Uranium

- [American Nuclear Society -Nuclear Careers](http://www.ans.org/pi/edu/students/careers/)**: (<http://www.ans.org/pi/edu/students/careers/>)
This site provides information about the job of a nuclear engineer. With links to a series of posters. Gr. 9+.
[Nuclear Fission vs. Nuclear Fusion](#)
[Nuclear Methods in Landmine Detection](#)
[Nuclear Power Applications in Space](#)
[Nuclear Waste Transportation and Disposal \(Yucca Mountain\)](#)
- [Areva- Funky town commercial](http://www.youtube.com/watch?v=GgZsamFWyBI&feature=channel)**: (<http://www.youtube.com/watch?v=GgZsamFWyBI&feature=channel>)
YouTube video . A 30 second clip showing the process of uranium from ground to energy .
-  **[Areva Resources website](http://www.avevaresources.ca/)**: (<http://www.avevaresources.ca/>)
Check out Areva's facebook site and the Youtube videos.
-  **[Cameco – Uranium 101](http://www.cameco.com/uranium_101/)**: (http://www.cameco.com/uranium_101/)
Lesson plans and links to many other Uranium sites.

✿ <http://teachnuclear.ca/Canadian Nuclear Association Teach Nuclear: http://teachnuclear.ca/>
Lesson plans about concepts, issues and people related to the nuclear industry. Each lesson is aligned to curriculum. Gr. 9-12

✿ [Kiggavik Project: through the eyes of a young person:](http://www.youtube.com/watch?v=Qc7Yw21-YbY) (<http://www.youtube.com/watch?v=Qc7Yw21-YbY>)
YouTube video about the development of a uranium mine in Nunavut. Gr. 7+.

[World Nuclear Association:](http://www.world-nuclear.org/Nuclear-Basics/) (<http://www.world-nuclear.org/Nuclear-Basics/>)
Reference

✿ **Saskatchewan Geology**

Andsell, K.M. and MacDougall, D., (2002). Trip A7: Geotrip for teachers: Hard rocks and minerals in the Precambrian Shield. Field Trip A7 Guidebook, Geological Association of Canada/Mineralogical Association of Canada, 45 pp.

[Cypress Hills Interprovincial Park: Geology Brochure:](http://www.albertaparks.ca/media/2850121/cypress_hills_-_geology_fact_sheet.pdf) The geology and history of the Cypress Hills area.
(http://www.albertaparks.ca/media/2850121/cypress_hills_-_geology_fact_sheet.pdf)

Geoscape: Northern Saskatchewan Geoscape

Poster PDF English: http://publications.gc.ca/collections/collection_2007/nrcan-rncan/M41-8-91E.pdf

Southern Saskatchewan Geoscape (<http://www.geoscapask.ca/>) – with lesson plans.

Poster PDF English: (http://publications.gc.ca/collections/collection_2007/nrcan-rncan/M41-8-84E.pdf)

Geological Atlas of Saskatchewan: (http://www.infomaps.gov.sk.ca/website/SIR_Geological_Atlas/viewer.htm) An interactive geological map and database at the Saskatchewan Energy and Resources website. Shows location of mineral deposits, mines, oil, and gas wells.

Geological Survey of Saskatchewan: **Introduction to the Geology of Saskatchewan:**
(<http://www.economy.gov.sk.ca/Default.aspx?DN=1917fb7f-52db-4215-bbb3-38132cb339ac>)

Sets of 20 Saskatchewan rock samples: One set per school.

Geological map of Saskatchewan: (http://economy.gov.sk.ca/geology_map)

Interpretive Geophysical Maps of Saskatchewan: (<http://economy.gov.sk.ca/InterpretiveGeophysicalMaps>)

Mineral Resources Map Of Saskatchewan (2016): (<http://economy.gov.sk.ca/resourcemap>)
This map shows the location of all the minerals deposits and mines in Saskatchewan.

Saskatchewan Geological Highway Map (2002): A colour, double-sided product, published by the Saskatchewan Geological Society (SGS), features the provincial road system on maps of the surficial and bedrock geology. It shows how the Saskatchewan landscape was formed, includes photographs of geological features throughout the province, and has educational theme panels on such topics as meteorite impacts, fossils and diamonds.

More information on map contents can be found at: www.virtualsk.com/current_issue/geo_map.html

To order online go to <http://sgshome.ca/products/publications>

The Encyclopedia of Saskatchewan – Reference Material: (<http://esask.uregina.ca/entry/geology.html>)

The Qu'Appelle Valley Geolog: (<http://www.cmste.uregina.ca/valley/tour.html>)

Biology, geography, and geology lessons, virtual tours, and activities from the Fort Qu'Appelle region.

Note: some of the stops have been moved or no longer exist. Gr. 4 – 8.

Mysyk, W.K. and Kulyk, C.L. Saskatoon's Stone. A Guided Tour of the Geology and History of Stone Architecture in Saskatoon. Saskatoon, Houghton Boston Printers and Lithographers, Ltd.

This booklet was done in conjunction with the Centennial of the City of Saskatoon. It contains: colour photos of more than 40 buildings; highlights interesting historical and architectural details and describes different kinds of building stone seen in Saskatoon architecture.

Museum of Natural Sciences Saskatoon: (<http://artsandscience.usask.ca/museumofnaturalsciences/>)

The Museum of Natural Sciences is located on the grounds of the University of Saskatchewan. It is designed to outline evolution throughout geological time, providing an integrated learning environment, with displays of living plants, animals, fossils, rocks and minerals. A working seismograph is on display in an adjacent hallway. It serves as a teaching resource for university and school students, and the several thousand visitors that pass through annually.

Larsen, A., Ansdell, K., and Prokopiuk, T., (2010). *Geologic Boulder Map of Campus, University of Saskatchewan College of Arts and Science.* This map, mainly of igneous and metamorphic boulders on campus, explains their compositions and textures and provides information on their origins. Campus building stones are also described. There are three Geo-walks identified, the Igneous, Metamorphic, and Unique boulder Geo-walk. The brochure is written for the general public and includes a glossary of geological terms.

General Sites

British Geological Survey: (<http://www.bgs.ac.uk/discoveringGeology/home.html?src=topNav>)
Information and downloads on fossils, rocks, geological timescale, volcanoes, and earthquakes.

✿ **Canadian Museum of Nature Gallery Interactives: Fossils:** (http://nature.ca/discover/exf/index_e.html)
Lots of interactive activities for Gr. 4+.

Earth Learning Ideas: (http://www.earthlearningidea.com/English/contents_alphabet.html)
A global website that publishes Earth-related teaching ideas

Exploring Earth: (http://www.classzone.com/books/earth_science/terc/navigation/investigation.cfm)
Information, lesson, graphics, animations on Earth Science topics. Interactives.

Geological Society of America-Educational Programs, Products, and Resources:
(<http://www.geosociety.org/educate/>)

Earth Science Week: Classroom Activities: lesson plans by grade.

✿ **Geological Survey of Canada:** (<http://www.nrcan.gc.ca/earth-sciences/science/geology/10862>)
Information on geology and mining in Canada and importance of earth resources in our everyday lives.
The Atlas of Canada – Geology: (<http://atlas.nrcan.gc.ca/site/english/maps/geology.html>)
Information on different types of rocks and a map showing distribution in Canada

Geology.com Teachearth: (<http://geology.com/teacher/>)
A wide range of earth science lesson plans for any age category. Links to classroom activities, lesson plans, rock and mineral photos, mineral identification charts, maps and satellite images, and time scales.

Geology Page: (<http://www.geologypage.com/>)
A site with daily posts on fossils, plate tectonics, volcanoes, the moon and mars...; videos; photos; geology Software.

Oresome Resources: (<http://www.oresomerresources.com/>)
An Australian organization representing companies that have an interest in exploration, mining, minerals processing, gas and energy production. Educational resources , developed by teachers, based on the minerals and energy sector.

Visual Capitalist: Mining Infographics (<http://www.visualcapitalist.com/category/mining/>)

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