

Meeting Your District's Field Trip Policy

www.BCMuseumofMining.org

www.TheConcentrator.ca

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For **questions** or **booking**, please call the Programmes & Communication
Coordinator at **1-800-896-4044 ext. 226**

Thank you for your interest in the BC Museum of Mining and/or the EPCOR Britannia Mine Water Treatment Plant Discovery Centre. This guide aims to help you fulfill the needs of your District's Field Trip Policy by giving you some useful information on:

Visit itinerary & activities

Curriculum links

Learning objectives

Information for parents

Risk management

Highway 99 reputation

Visit Itinerary & Activities

Depending on the booking you make, your visit to the BC Museum of Mining will involve:

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|---------------------------|---|
| Water Treatment | Guided tour to the nearby EPCOR Britannia Mine Water Treatment Plant. Group travels 2km by bus to this facility, to observe the plant from a viewing platform, before exploring interactive displays that mimic the actual water treatment plant process, supervised by Tour Guide. (Approximately 1 hour). |
| Tunnel Tour | Guided underground tunnel tour. Option 1: Electric train transports group (up to 36 people) through 400m long tunnel. Group leaves train to visit two drill-chambers to hear interpretation of mining/miners, and to experience working historic equipment (usually drill(s), mucking machine, carbide lamp) demonstrated by the Tour Guide. Option 2: Group walks through tunnel to study the recent mineralization, and time-dependent may or may not experience equipment as outlined above (Approximately 30 minutes) |
| Mill Building | Guided visit into this building (National Historic Site) to see the building from inside, and to learn about the froth flotation process (method of ore separation partly pioneered at Britannia) via a demonstration led by the Tour Guide. (Approximately 15 minutes) |
| Exhibits | Teacher supervised time in indoor museum exhibits. Artifacts and photos interpret both Britannia and mining in BC. (Approximately 20 minutes) |
| Gold Panning | Tour guide will demonstrate technique, then group will pan for gold in our troughs. School groups given sand/gold vials, so all students guaranteed to find gold; other minerals can be found too. (Approximately 30 minutes) |
| Video | Group will watch one of our educational videos (pre-selected by teacher) in our classroom space. If school wishes, group can eat their lunch during this time. (Approximately 30 minutes) |
| Discovery Area | Teacher supervised time in our covered Geology Discovery Area. Hands-on exhibits feature fossils, rocks, classification, minerals and volcanoes. Area also includes our popular dinosaur footprints fossil. (Approximately 15 minutes) |
| Gift Shop | Time can be made available to allow students to make purchases from the Gift Shop. (Approximately 30 minutes: in small groups) |
| Heritage Buildings | Our site features a number of historic Britannia buildings and our 235 tonne Super Truck. Some of these will be interpreted during tour. |

As the train holds a maximum of 36 people, larger groups will be split up, for each to rotate around the site.

Curriculum Links

At the museum we strive to provide a curriculum context for our educational programmes as outlined in the BC Integrated Resource Packages. We believe all grades can achieve desired curriculum outcomes on different levels, though the basic Museum tour will specifically benefit Grades 2 to 6, studying the Social Studies curriculum. A tour of the EPCOR Water Treatment Plant will specifically benefit Grades 5 to 12. Appendix A outlines specific PLOs for the Social Studies IRP.

We can also tailor our tours to highlight more specific science and/or environmental aspects. Please contact us for more information.

The following gives some of the PLOs that can fit a visit to the Museum, either during a tour, or as pre/post visit opportunities.

Social Studies K to 7	Identity, Society & Culture Economy & Technology Human & Physical Environment
Science K to 7	Processes of Science Physical Science Earth & Space Science
Science & Technology 11	Resource Management & Environmental Planning Pollution
Geography 12	Resources & Environmental Sustainability
English Language Arts	Oral Language (speaking & listening)

A guided tour to the EPCOR Britannia Mine Water Treatment Plant Discovery Centre particularly fits well with the 2007 Environmental Learning & Experiences Guidelines. This guide champions direct experience and critical reflection with environmental issues. A visit to the centre gives direct experience with the acid-rock drainage issue and remediation and encourages the debate over our need for natural resources and sustainability.

Learning Objectives

A visit to the Museum is seen as both an educational and entertaining experience. We have identified the following learning objectives that students can achieve during a visit.

Knowledge & Understanding

- Learn about the Britannia Mine: working life, community, environmental issue & remediation
- Learn about changing technology & working conditions during the mine's operation
- Learn about importance of rocks and minerals as a natural resource
- Making comparisons between life today and life in early 1900s
- Understand dichotomy of harsh working life and strong community spirit/love for Britannia

Skills

- Assimilate information by listening and observing
- Personal conduct within a group situation
- How to follow instructions for scientific experiment safely (EPCOR Discovery Centre option)
- How to use evidence to classify/identify rocks and fossils (Discovery Area option)
- How to respect historic artifacts (physically and intellectually)

Attitudes & Values

- Feeling glad that modern working conditions/technology are improved from early 1900s
- Feeling glad that the pollution issue at Britannia has been resolved
- Feeling awed by being inside Mill Building
- Believing in importance of environmental stewardship

Enjoyment, Inspiration & Creativity

- Enjoy experience of underground train ride
- Thrilled at finding and keeping real gold (Gold Panning option)
- Enjoy authentic heritage experience
- Appreciation of the beauty of the Howe Sound scenery

Activity, Behaviour & Progression

- Taking part in fun, group experience
- Interacting with Tour Guide through two-way questions/answers
- Taking away better understanding of BC history and importance of environmental remediation

Information for Parents

In addition to the information already given, you may find the following information useful when obtaining consent from parents.

Educational Purpose

An exciting, educational visit to an authentic heritage site, for a guided underground train ride into a historic, hard-rock tunnel, to hear about the history of one of the world's largest copper mines of the 20th century, and to experience historic working mining equipment. Students will learn about the once isolated company town of Britannia Beach, and be able to make personal connections between their life today, and how working and community life affected people in the early 1900s. A visit to the EPCOR Britannia Mine Water Treatment Plant Discovery Centre will allow students to engage with a local environmental issue and its remediation. They will also explore the importance of using non-renewable natural resources in a sustainable way.

Level of Supervision

Each group (maximum 36 people) has a Tour Guide for the duration of their visit. The group will be with the Guide at all times in the tunnel and Mill Building. There may be short times when the group is unaccompanied by the Guide, but these are only in our public spaces, and is with the supervision of the teacher(s) and school helpers. Small groups of students are allowed in the Gift Shop at one time where supervision from adults (Tour Guide and/or school) is required. From the school, the museum requests an adult to student ratio of 1:6 elementary and 1:10 secondary.

Scope of Risk

The Museum is a former industrial site that still falls within the Mines Act, however a visit to the Museum is considered to be LOW RISK. However, as with any site/buildings, there are unlikely, but still potential risks; these are addressed by Museum staff as appropriate. The most likely risks are: slipping on gravel, falling down stairs, tripping on uneven ground.

Safety Precautions & Rules

Museum Museum staff take the safety of visitors seriously. Staff are trained in risk awareness/management and there is always at least one first aider on site. There is always an EPCOR operator on site when visiting the Discovery Centre. The tunnel is 'scaled' and inspected by a Mines Inspector annually; it has three exit points, good electric lights and daylight can be seen from any part of the tunnel. By the Act regulations, everyone must wear a hard hat in the tunnel and Mill Building. First aid kits are located in various positions. Tour Guides and Front of House staff carry two-way radios and are trained in emergency procedures. Entry into any other mine tunnel is impossible. The site is fenced and gated, which would prevent any students leaving the site unauthorized. Tour Guides/Front of House staff are also trained in our Child Safety Code of Behaviour, and have been security screened for Positions of Trust. Part of our Child Safety Policy includes not allowing public on school tours, and visually identifying all teachers/adult helpers with stickers.

Individual Visitors to the site are expected to be aware of their own safety. To help with this, Tour Guides verbally give a set of safety rules to everyone before they begin the tour.

- Watch your footing at all times. No running
- Hard hats must be worn at all times underground and in the Mill building
- Hands, feet and heads must be kept inside the train
- Do not touch any artifacts unless invited to
- Stay behind all barriers
- No eating / drinking / smoking on site
- Listen to your guide and follow all instructions

Student Requirements

What to Bring A good part of the tour is either outdoors or in unheated spaces, so students should be clothed for the weather. If traveling a distance, remember that warm sun in Vancouver doesn't always mean the same around Britannia Beach. The tunnel is 12°C year round, so a light jacket at least is recommended, even in summer. Gloves, a scarf and hat are especially recommended around winter as the chilly sea air can make the site feel very cold. Comfortable walking shoes are recommended. Hiking or gum boots are not necessary, but due to the clay on the tunnel floor, the Museum advises against students wearing their 'best white running shoes'.

If booked by the schools, students should also bring: lunch, snack, and money for the gift shop. And don't forget a camera!

Conduct The Museum wants all its guests to enjoy their visit. To help ensure this, we ask that all students be respectful of others on site (e.g. their group, other visitors, Tour Guide, Gift Shop staff). The buildings and artifacts are all authentic heritage pieces and need to be respected and cared for to help keep them for future generations. For their safety, all students should follow the guidance or instruction of the Tour Guide, and should not choose to leave the group (e.g. for bathroom break) unannounced.

Our Tour Guides also love to interact with their groups, so everyone should feel free to ask or answer questions during their tour...and remember to have fun too!

Cancellation / Bad Weather

Cancellation by School If the school cancels the trip before 3 working days, there will be no cancellation fee. If the school cancels within those 3 working days, the school will be charged the full Admissions cost of the trip.

Cancellation by Museum This is only likely if very bad weather forces the Museum to close for safety reasons (i.e. serious snow or wind storm). In this instance, the school would be contacted before 9am on the morning of the visit at the latest, and would of course not be charged for the visit. In such a case, the Museum cannot reimburse the school any other costs, e.g. transport.

Risk Management

We have provided an overview in the **Information for Parents** section, but if you need a more detailed breakdown to write a risk assessment before your visit, here is some extra information.

Nature of Site

This former industrial site is managed under the Mines Act. A visit includes these environments: tunnel, electric train carriages, Mill building ground floor, inside heritage buildings, outdoors, stairs (maximum 60 steps). All have minimal inherent risks and are managed as LOW RISK environments.

Tunnel The train ride is through a 400m long tunnel, with separate entrance and exit point (and a third extra portal). The tunnel length and three portals mean that no mechanical ventilation is required. The tour tunnel was an original service tunnel and is not connected to the actual mine, so it is not possible for anyone to leave the group and get lost. It is well lit, and throughout the tunnel, either the entrance or exit is visible. Being a hard rock tunnel, which is 'scaled' and inspected annually, it is considered a very safe underground experience. Hard hats must be worn as a precautionary measure and allow us to meet the Mines Act regulations.

Train Visitors ride in the 3, seated train carriages. The carriages are roofed, and there is walking space between the side of the carriages and the tunnel wall. On occasions, a group may choose or agree to walk through the tunnel instead of riding the train. If done, flash lights are given out and the Tour Guide will give guidance and a safety talk before going through.

Mill Building For safety reasons, we currently restrict visitors to the Ground Floor of this building. As there are tripping hazards in certain areas, the Tour Guide controls entry into this building, and they will keep visitors away from these areas. Hard hats are required in this building.

Heritage Buildings These are heated, lit and managed as any other public building.

Outdoors The outdoor portion of our site is mostly gravel surfaces with wooden steps in places. Our main orientation routes are kept clear, though around the perimeters, there are small pebbles/rocks, shrubbery and small pieces of iron that could pose a tripping hazard. However, it is not expected that students will be in these areas. Our wooden steps are kept clear, and maintained as necessary to prevent them becoming a slipping hazard.

Staff Our staff are trained in emergency procedures, and there is always at least one trained first aider on site. First aid kits and fire extinguishers are kept in appropriate locations throughout the site.

The Museum's Child Safety Policy states that staff will be security screened, including with an additional Positions of Trust disclosure. We have a comprehensive Child Safety Code of Behaviour which staff follow; our Tour Guides and Front of House staff are trained in this. We do not allow public on school tours, and ask adults with a school group to wear stickers to identify them as belonging to the group. At no point on the tour, will the students not be in the presence of their teacher(s) or helper(s). Please contact us if you would like further details of our practices.

Highway 99 Reputation

For those living outside the Sea to Sky Corridor, some see Highway 99 as a road to be avoided. As individuals living in the Sea to Sky Corridor, we (Museum staff) have driven the Highway many times, in every season. We know that driving the two-lane and construction sections need a higher level of due care and attention than most other highways. However, around 30,000 people a year visit the Museum (and not forgetting the 2 million visitors to Whistler every year), and all come on the highway. We therefore encourage you not to view the highway as a reason for not visiting the Museum.

We would like to put forward the following information supplied by the Sea to Sky Improvement Project to help you make an informed decision:

- On average, around 13,700 vehicles are driven on Highway 99 every day
- The collision rate does remain higher than other Provincial highways, though the Sea to Sky Improvement project continues to lessen risk. Unsafe speed is the highest cause of accidents, and around 50% are single vehicle, off-road accidents
- Over 50% of the highway construction has been completed (as of July 2007), with much of the completed sections becoming 4 lane highways
- Construction delays are generally no more 30 minutes at most through the day between Horseshoe Bay and Squamish (though most delays are less than this)

Appendix A

Kindergarten	On site	Identity, Society & Culture – concept of change Processes of Science – using senses
	Pre/post visit opportunities	Economy & Technology – human needs, technologies used in their lives Human & Physical Environment – local environments
Grade 1	Pre/post visit opportunities	Identity, Society & Culture – family traditions, roles, composition (<i>historically</i>) Economy & Technology – human needs Process of Science – classify objects, events
	On site	Identity, Society & Culture – individuals/community Human & Physical Environment – physical environment on human activities
Grade 2	Pre/post visit opportunities	Human & Physical Environment – landforms on map (<i>Howe Sound, Coast Mountains</i>), responsibility to environment
	On site	Identity, Society & Culture – community changes over time, importance in communities Economy & Technology – community needs/wants, technology influences
Grade 3	Pre/post visit opportunities	Human & Physical Environment – responsibility to environment, physical influences on early settlement
	On site	Identity, Society & Culture – key events (<i>influential copper mine</i>), immigrants Economy & Technology – communities and their resources, transportation systems Human & Physical Environment – mineral resources, sustainability
Grade 5	On site	Economy & Technology – technology on lifestyles/environments
	Pre/post visit opportunities	Economy & Technology - trade