

Kamloops Exploration Group (KEG) Downtown Geology Geocaching Tour – Kamloops BC

Minerals and mined products are all around us. We hope this tour will show you some interesting sites and uses of rocks and/or mined products in the downtown area. It will take about 2-3 hours to complete. As you visit each site, please answer the appropriate question. To complete this tour, use a hand-held GPS (a map of the site locations is available for those without access to a GPS).

When all questions are answered, please put your contact information at the bottom of the page and drop off the form at the Kamloops Museum & Archives, 207 Seymour Street, Kamloops, BC, by 4pm May 31, 2011, to be entered into a draw for a GPS. Draw date will be Wednesday, June 1, 2011.

Please stay safe during your time touring the downtown, cross the streets at crosswalks and always watch for vehicles. Please stay off of private property. All sites are public or can be viewed from the sidewalk. **Have fun!**

UTM Nad 83 | Zone 10

**688170mE
5617023mN**

1. This first site has many interesting geological aspects. The beautiful stone wall is made of many different rocks that have a subrounded shape (how many different rock-types can you count?). The bronze statue (bronze is a mixture of copper and tin), the wooden benches with metal arms, and even the stained glass windows are made of mined products. The main component of glass is silica obtained from quartz, a common mineral in most sand deposits.

What is the large concrete structure at the centre of the square?

**687966mE
5617127mN**

2. A common use of rock is to provide decorative accents as in this small garden. Tucked in amongst a few rocks is a small fluted concrete bowl. Concrete is a mixture of rock, sand, cement, water, and a few additives, whereas cement is made from calcium carbonate (limestone), silica, alumina and iron ore; these can come from chalk, shale or clay. A concrete manufacturer is located just east of Kamloops with a small limestone quarry on the hill behind it.

What creature “sits” in the middle of this bowl?

**687998mE
5617199mN**

3. Art is all around us. This stop is at a well-known statue created by Garry Davies and Terry Norlander. The metals used in this statue are copper and tin (bronze). Major sources of copper are the minerals chalcopyrite and chalcocite and tin comes from the mineral cassiterite. The main part of the statue sits on a base of concrete. Many items around us have been mined, including the sidewalk you are standing on, roads, the streetlights, and even your car is made of mined products.

Name one item (there are many) that comes from mining that you can see from this location.

**688263mE
5617158mN**

4. This small nook shows a wonderful pairing of natural geology with a product manufactured from naturally occurring minerals. The step is granite or granodiorite. You may have seen similar materials used as countertops in homes. The small tiles are manufactured from clay.

What shape are the tiles?

**688343mE,
5617159mN**

5. Large tiles of stone cover the lower portion of this building. The rock is called syenite. This syenite contains large crystals (phenocrysts) of potassium feldspar.

What colour are the phenocrysts?

UTM Nad 83 | Zone 10

**688092mE
5617338mN**

6. This outdoor art is a relative new-comer to Kamloops, arriving in June 2007. It is created by renowned Canadian sculptor Joe Fafard. The statue is made of a textured bronze. Bronze is an alloy of copper and tin.

What is the name of this statue?

**688261mE
5617596mN**

7. This interesting monument pays tribute to a geologic phenomenon in the area. The monuments have copper banding, depicting different water levels. The copper of these bands comes from the mineral chalcopyrite, which is mined from various locations around BC, including the Highland Valley Copper Mine in Logan Lake.

What was happening 10,500 years ago?

**688503mE
5617223mN**

8. Many alloys of metals are used as decorative embellishments in our homes and on our buildings. The material on the handles and backplates of the door at this location are an alloy, or mixture, of copper and zinc.

What is the name of this alloy?

**688500mE
5617140mN**

9. Two stone columns grace the entrance of this building. Both these columns are made of granite, a type of igneous rock; an igneous rock is the frozen product of once molten magma or lava. As the magma moves up through the earth, it may pick up pieces of existing rock that do not completely melt. When this happens, the foreign rock is called a xenolith. One of these columns has a xenolith in it (it is dark, about 7cm long, and looks different than the rock around it).

Which column has the xenolith, the left or the right?

**688913mE
5616889mN**

10. Peterson Creek has been re-routed through the city using culverts and diversions. It flows northward into the Thompson River. At this site the city has built a barrier wall for your protection.

What is the barrier wall's composition?

(For a whimsical use of river rocks, take a look at the fencing at 688870E, 5616978N).

**688642mE
5616978mN**

11. This business has used a metal product to cover stairs. This metal product resists corrosion, which is ideal in this application.

What are the stairs made of?

**688318mE
5616766mN**

12. This building has stained glass in its front doors. Glass is coloured by mixing metals into the glass while it is molten. The blue is from adding cobalt, yellow glass is created by adding cadmium or lead and the addition of gold forms red glass.

What shape are the windows under the dome?

Contact Information

Name: _____

Phone number: _____

If participant is under the age of 13, please add the parents contact information here:

Parents Name: _____

Phone number: _____