



# Geoscape Ottawa-Gatineau

Grade 7 Lesson Plans to accompany the Geoscape Ottawa-Gatineau poster and website  
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## Theme Thirteen: Geoscape Culminating Activities

### Possible fieldtrips or field activities

#### **Tour of Logan Hall at the Geological Survey of Canada (601 Booth St.):**

Interesting rock, mineral, fossil and meteorite collection in the museum, as well as a large outcrop of fossiliferous limestone in front of the building. While there, cross the street to visit Camsell Hall in 580 Booth for the **Alice Wilson display**, which will inform you about the first female geologist to work for GSC. She mapped all of the Ottawa area by bicycle in the 1930s, and her maps are still valid today

**List of tours and visits that can be arranged at Natural Resources Canada** (As well, arrangements can be made for scientists to visit your classroom.) [http://gsc.nrcan.gc.ca/outreach\\_e.php](http://gsc.nrcan.gc.ca/outreach_e.php)

#### **Museum of Nature, Pinch Collection of rocks and minerals:**

A spectacular collection including many "type" specimens, which were the first sample ever found of that mineral and the one to which all others must be compared if they use that name.

#### **Ottawa-Gatineau Geoheritage Project:**

Internet guide describing several local sites including the spectacular stromatolites at Champlain Bridge (visible in the Fall months) and geology of Hogs Back Rapids  
<http://www.carleton.ca/~jadonald/fieldtrips.html>

#### **Neighbourhood tour:**

A simple project or assignment would be for students to tour their own neighbourhood and map the outcrops and the stones used in the construction of houses. Students can attempt to classify rocks into igneous, metamorphic or sedimentary. They can try to find fossils in the sedimentary rocks. They can collect rock types from gravel.

#### **Walking Tour of Parliament Hill area:**

Visit buildings, monuments and the Rideau Canal, emphasizing the local and imported building stones used in their construction and the characteristics that can be seen of the Ottawa River.  
(See information below.)

## Useful notes for walking tour of Parliament Hill Area

### Rideau Canal and Parliament Buildings

1. Rideau Canal (Viewed from Chateau Laurier on Wellington)
  - Built in 1820's to provide a protective water way from Montreal (St-Lawrence River) to Ottawa (Ottawa River) and across to Kingston (Lake Ontario).
  - Wall of canal is mostly limestone from the Ottawa Formation
  - In this area, there are eight locks that lower the level of the water by 24 metres to reach the Ottawa River.
2. Cliffs by the Locks
  - Between Chateau Laurier and Parliament Hill there are steps
  - Down these steps horizontal limestone beds with many fossils can be viewed
  - These layers have some vertical joints and small faults.
3. Parliament Hill: First gate
  - Many types of sandstones in the walls and upright columns
  - Red sandstone in the rosettes.
4. Parliament Building: East Block
  - Curb stone: grey Stanstead granite from Quebec
  - Steps leading to entry: Gloucester Limestone
  - Most of the exterior of the building: Nepean Sandstone (darkly weathered)
  - Around doors and in carvings: khaki-coloured Wallace Sandstone from Nova Scotia
5. Laurier Statue
  - Base of most statues: grey Stanstead granite from Quebec
6. View of cliffs
  - natural outcrops are in upper sections
  - very flat, undisturbed beds of limestone
  - parts of walls have been build up with large, loose-fitting stones
7. Baldwin-Lafontaine statuary
  - Unlike most statues, this base is pink Tennessee Marble with bryozoa fossils.
  - pink calcite crystals in a white fine-grained matrix
8. View across River
  - Bluffs of Ottawa Limestone
9. Parliament Building: Centre Block
  - Exterior construction: Mostly Nepean Sandstone
  - Windows and Sill: much finer grained material
10. Parliamentary Library
  - Exterior Construction: Mostly Nepean Sandstone
  - Trim for arches over window: Ohio Sandstone
  - Flying buttresses: light grey Gloucester Limestone
11. McGee Statue
  - Base: Stanstead Granite

12. Steps to the west of Library
  - Steps: Stanstead Granite
  - Balustrades: very fine grained, buff limestone showing the lacy patterns of bryozoan fossils
13. from Queen Victoria monument
  - View of Chaudiere Falls
  - Bluffs of heavy Ottawa Group Limestone below the Supreme Court Building
14. Parliament Building: West Block
  - Exterior construction: mostly Nepean Sandstone
  - Window trim: fine grained khaki Wallace Sandstone from Nova Scotia
  - Arches and rosettes: red sandstone
  - Pillars: polished Stanstead Granite
15. Peace Tower
  - Steps: grey Hampstead Granite
16. St. Andrew's Presbyterian Church
  - Exterior Construction: Mostly local Gloucester Limestone with some coral fossils
  - Door arches: laminated sandstone
17. War Memorial
  - Paving stones: grey, red and rose-grey granite from Scotstown, Beebe, Guenette and Riviere a Pierre, Quebec (large feldspar crystals) and Vermillion Bay, Ontario
18. Post Office Building (Elgin St. at Sparks St.)
  - Outside carvings (lion, etc.) Fossiliferous Deschambeault Limestone with round discs from stems of crinoids (marine fossils).
  - Exterior stones: Smooth Deschambeault Limestone walls and black, polished igneous rock (anorthosite) with dark reddish alteration minerals (from Quebec)
  - Underneath arches of windows: grey Stanstead granite
19. Langevin Block (Elgin St. at Wellington St.)
  - Exterior: olive coloured sandstone from the Miramichi area, New Brunswick
  - Interesting large cross beds
  - Window columns on second and third floors: red granite

