Tiffany Falls
-Virtual Field Trip-

School of GEOGRAPHY & GEOLOGY

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Directions: McMaster to Tiffany Falls

From McMaster University turn right onto Main Street West towards Ancaster. Follow Main Street West by turning left at the major intersection just past the Main West Mall (travelling straight will take you onto Osler Drive, Dundas). Main Street West becomes Wilson Street as you reach the bottom of the escarpment. Follow Wilson Street approximately half way up the escarpment. The parking area for Tiffany Falls is on the left-hand side of Wilson Street.

The falls are located within a forested area approximately 400m from the parking lot. The trail to the falls is narrow and quite steep in places and is only suggested for those with appropriate footwear and some hiking experience. Hard hats are recommended for close examination of rock faces due to frequent rock falls at this site.
The uppermost geological units of the Niagara Escarpment are visible from the base of the falls. (Thorold Formation (Fm) through Lockport Fm).

The creek meanders through the gorge where fluvial processes and landforms can be observed. Steep cut banks, debris dams, and decreasing clast sizes in fluvial deposits are evident downstream of the falls.

Talus slopes, slumps, and J-shaped trees can be observed on the steep walls of the gorge.
More views of Tiffany Falls
Tiffany Falls Conservation Area

Tiffany Falls Conservation Area is located on the Niagara Escarpment, which extends from the Niagara River at Queenston 725 kilometers to the islands off Tobermory on the Bruce Peninsula. In recognition of the escarpment's significant natural features and ecological importance, the United Nations Educational, Scientific and Cultural Organization (UNESCO) named the Niagara Escarpment a World Biosphere Reserve.

The trail that leads to the base of Tiffany Falls provides experienced hikers the opportunity to view the natural rock escarpment, the forested lower escarpment slopes and Tiffany Falls. Tiffany Falls is a total height of approximately 24.5 meters (80.3 ft).

Tiffany Falls Conservation Area is a significant natural area within an increasingly urban environment. The Hamilton Region Conservation Authority manages this 7-hectare (17.3 acre) property as a wilderness area and has provided a footpath to Tiffany Falls which crosses Tiffany Creek in two locations. Please be advised that in poor weather conditions and at certain times of the year, this footpath should not be used. You should be an experienced hiker equipped with appropriate hiking boots to use this footpath. Know your abilities and always hike with a partner.

If you would like more information about this or any other Hamilton conservation area, call (905) 525-2181 or visit online at www.hamrca.ca.
Highlighted formations are visible at this site.
GEOLOGICAL UNITS EXPOSED AT TIFFANY FALLS

- Lockport Fm
- Rochester Fm
- Irondequoit Fm
- Reynales Fm
- Thorold Fm
The Lockport Formation forms the upper part of the gorge at this site.
The Rochester shale is easily eroded and allows undercutting of the more resistant Lockport dolostone above. This causes collapse of the overlying materials and gives the escarpment its steep face.
The Irondequoit dolostone is well exposed around the gorge. At this site, the formation is particularly massive, showing few fractures or joints.
Reynales Formation consists of medium-grained, dark grey/brown dolostone with thin shale interbeds. Sediments deposited in warm shallow seas under conditions of changing wave and current energies.
Interbedded sandstone and shale of the Thorold Formation are well exposed at the waterfall, but are buried by talus around the rest of the gorge.
Red-brown stained tufa deposits (calcium carbonate precipitates) can be observed on the surface of exposed bedrock.

Fallen rocks at the base of the falls; angular dolostone blocks of the Lockport Formation.
Downstream of the falls, Tiffany Creek meanders within the gorge.
Tiffany Creek

High Flow

Low Flow
J-shaped trees and talus
Acknowledgements:

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