



APGO Education Foundation Launches Niagara Gorge Geotrail on GeoscienceINFO.com

January 23, 2023, Toronto, Ontario: The APGO Education Foundation (“the Foundation”) is pleased to announce the release of our sixth Geotrail, the Niagara Gorge Geotrail, located along the popular Niagara River (Figure 1). This Geotrail showcases the beautiful stratigraphy exposed along the Niagara River and is a key location to understand the geological history of the area. These very same rock units extend along the entire Niagara Escarpment and outcrop at many of the other Geotrails in GeoscienceINFO. To visit all our Geotrails go to [GeoscienceINFO-Geotrails](#).



Figure 1. Map of Hamilton/Niagara region showing location of the Niagara Gorge Geotrail.

Our **Geotrails** offer a unique geology-based hiking experience that can be accessed in the field, at home, or in the classroom. These 1–3-hour long hikes are located along seasoned trails and feature stops along the way that highlight areas of geological significance. We recognize that while visiting sites in person is a great way to learn, this is not always possible. This is why we have designed our Geotrails to be readily accessible and provide the user with as immersive an experience as possible, through the application of ESRI’s latest ArcGIS-based technology. To do this, Geotrails include features such as:

- 360-degree photos and/or drone videos to provide a thorough overview of each site.
- 3D LiDAR images that show where key features such as fossils, important structures and other geological features are on the outcrops.
- Slide bars to show the locations of important stratigraphic units.
- Descriptions of the geological features written in an understandable form for the public
- Audio descriptions are included in many of the segments.



One of the most popular waterfalls in the world, Niagara Falls attracts millions of visitors each year that no doubt marvel at the powerful flow of water as it tumbles over the escarpment, on its way to Lake Ontario. Indeed, the Niagara River is a powerful force! About 12,000 years ago, the steep escarpment was located where the rest of the Niagara Escarpment is located, in Queenston, just south of Lake Ontario. Since then, the Niagara River has eroded the escarpment here approximately 11 km upstream to its current location at Horseshoe Falls.

All this erosion has left us with a spectacular 11-kilometre-long gorge (Figure 2) that shows off the pages of history that are the rock units of the Niagara Escarpment. These units range from the Queenston Formation, just above the river's edge, which was deposited approximately 445 million years ago in the Late Ordovician Period, to the Lockport Group of limestones and dolostones at the top of the gorge, which were deposited approximately 425 million years ago in the Early Silurian Period. In this Geotrail, you will explore the gorge and its hiking trails, while learning about important geological features including a massive coral reef, fossils such as trilobites, evidence of ancient earthquakes, and even a mammoth pothole formed by abrasive scouring (Figure 3).



Figure 2. Steep wall of the Niagara Gorge.



Figure 3. Overturned pothole in boulder at Niagara Gorge.

This Geotrail was developed by the GeoscienceINFO team led by Manager Dr. Deana Schwarz, P.Geo., and the field team from the School of Earth, Environment & Society at McMaster University led by Dr. Carolyn Eyles, P.Geo. and Dr. Katie Maloney. We will be releasing more Geotrains in the Niagara Hamilton/Niagara region in 2023 and onward, to enhance public knowledge of the important geological and environmental history of the Niagara Escarpment. Partnered with the [Bruce Trail Conservancy](#) (BTC) and the [Niagara Peninsula Aspiring Global Geopark](#) (NPAGG), we will continue to enhance public knowledge of geoscience using a hands-on and virtually accessible approach through the release of more Geotrains along the Bruce Trail and in the Niagara region.

Want to know more about the fascinating geological and environmental history of the Niagara Escarpment? – Watch our Geovideo at <https://geoscienceinfo.com/geovideos>.



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About the APGO Education Foundation

The APGO Education Foundation (“the Foundation”) is a registered charitable organization under the Canada Not-for-profit Corporations Act, registration number 84604 5052 RR0001.

The purpose of the charity is to advance the education of the public in the area of geoscience by:

- Holding lectures, presentations, and conferences on geoscience both in person and virtually to introduce geoscience to high school and university students as well as enhance the knowledge of the general public.
- Providing scholarships to post-secondary students for the study of geoscience in the final year of a Bachelor of Science (B.Sc.) degree program.
- Providing bursaries to immigrants to Canada who are internationally trained geoscientists and have demonstrated financial need for completion of licensure procedures for registration as professional geoscientists (P.Geo.s) in Ontario.

APGOEF provides funding to support innovative geoscience education projects working with university geoscience departments, community groups and not-for-profit organizations across Ontario. Please see our website at www.apgoedfoundation.ca

GeoscienceINFO.com an innovative one-stop spot for the public for information about the earth beneath our feet. This new website provides interesting information on all facets of geoscience. A particularly exciting feature of GeoscienceINFO.com is the highlighting of virtual fieldtrips in different areas in Ontario. This enables viewers to experience and learn about the geology of an area while traversing it digitally in ESRI ArcGIS Online™ and StoryMaps™. Information on the latest discoveries and news in the world of geoscience is featured on the website, in our blog [Beneath Your Feet: A Geoscience Blog](#), as well as on our social media.

If you like our work, please consider making a tax-deductible donation to support our programs.

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