



APGO Education Foundation Releases Cheltenham Badlands GeoHike on GeoscienceINFO.com

August 27, 2024, Toronto, Ontario: The APGO Education Foundation (“APGOEF”) and the Environmental and Earth Sciences department at McMaster University are pleased to announce the release of the Cheltenham Badlands GeoHike just northwest of Brampton, Ontario (see figure 1). This virtual tour takes the user to the famous red rocks of the Cheltenham Badlands, an exciting and rare geological site nestled in our very own province of Ontario. To see this as well as all our GeoHikes, visit [our GeoHikes page](#).



Figure 1. Map of southern Ontario, showing the location of the Cheltenham Badlands GeoHike (yellow star).

The stark, desert-like landscape of rolling, red shales at Cheltenham Badlands may remind you of the southwestern United States or even the surface of Mars, but rest assured you are not too far from the hustle and bustle of Toronto. This region is the result of hundreds of millions of years of sediment deposition and subsequent erosion, providing a rare window into ancient and ongoing sedimentary geological processes. Because of this, the public is no longer allowed to walk directly on the rocks here and must instead enjoy this geological phenomenon from the boardwalk only. The Cheltenham Badlands GeoHike takes you to four stops and describes how these beautiful rocks formed, why they have such a lovely red colour (see figure 2), why there are greenish-white bands throughout the outcrop, and how the valleys formed throughout the landscape (see figure 3).



Figure 2. Rolling, red shales at Cheltenham Badlands.



Figure 3. Small valley formed by water movement at Cheltenham Badlands.

The Cheltenham Badlands GeoHike was developed by the GeoscienceINFO team led by Manager Dr. Deana Schwarz, P.Geo., and the Environmental and Earth Sciences department at McMaster University, led by Dr. Carolyn Eyles and Dr. Dan Dicks. It is part of a growing series of geoscience-based hiking tours released across Ontario that aims to enhance public knowledge of geoscience using a hands-on and virtually accessible approach. We plan to release more GeoHikes in 2024 and subsequent years, throughout Ontario.

GeoHikes are 1-3-hour non-intensive hiking tours on maintained trails in Ontario that highlight local geology and describe their geological and environmental significance. GeoHikes can be used as guides while walking the trail in person, or as a virtual alternative at home or in the classroom. Visiting sites in person is a great way to learn but virtual tours are also an exciting way to expand one's knowledge when in-person access is not possible. Through the use of ESRI's innovative ArcGIS-StoryMap™ application and the integrated features, GeoHikes provide the user with an immersive experience. GeoHikes typically include:

- 360-degree photos and/or drone videos to provide a detailed overview of each site.
- LiDAR-based virtual 3D models that show locations of key features such as fossils, important structures and other geological features at the buildings or rock outcrops.
- Slide bars to show multiple images or overlays of important features or geologic information.
- Descriptions of geological features.
- Audio descriptions of written content.

About the APGO Education Foundation

The APGO Education Foundation ("APGOEF) 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 their 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, on 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. Your impact will be **DOUBLED** for donations made to December 31, 2023.

To Donate - <https://www.canadahelps.org/en/charities/apgo-education-foundation>

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