

The Ice Age in Rochester

Learn about **glaciers**, changing landscapes, lake formation, and **glacial erratics**, as you explore these exhibits about last ice age in western New York and how it changed Rochester's landscape



- What was Rochester like when **glaciers** were here?
- How did glaciers form and change western New York?
- What evidence do scientists have that glaciers were here?



MENDON PONDS VIRTUAL HIKE

- What clues can you find that glaciers once covered this area?
- Find each virtual kiosk to learn more about how glaciers changed our landscape.



ICE CAVE

- Find **glacial erratics**, **till**, and other features of glaciers
- How did this **glacial (washout) cave** form?



ROCHESTER SKYLINE

- Push the button to see how large the glacier that covered Rochester was.
- How long so you think it took for this glacier to form?



ICE (HOW COOL IS THIS?)

- Spray the cold surface and watch ice crystals form.
- Use the magnified **polarizing lens** to see different crystal formations.
- How long did it take for ice to accumulate and form a glacier?



TRACK THE GLACIER

- Use the sliding bar to make the **ice sheet** advance and recede
- How many different lakes were once in western NY?



MASTODON SKELETON

- What can the mastodon tell us about the last ice age?



How to use this guide

To help guide your visit, we have developed this learning pathway to explore a specific topic using some of the exhibit components.

1. Look up the words in bold in the vocabulary list on the back.
2. Follow this path as you explore the gallery, try a different path, or create your own path and follow where your curiosity takes you!



Glaciers are giant sheets of ice that form where **climates** of cool temperatures and high snowfall exist. They form as snow accumulates in regions of high winter snowfall and cool summer temperatures. As snowfall builds up, pressure increases, compacting snow to ice. As the glaciers move over the surface of the earth, they change the landscape. "**Ice Ages**" are periods of time where large portions of continents have been covered by glaciers, and have occurred in many places on earth throughout time, including where Rochester is now located. Evidence shows a giant ice sheet approximately two miles thick covered Rochester as recently as 13,000 years ago. The powerful glaciers cut through the land, redirected the flow of the Genesee River and produced all of today's Rochester landscape. Mendon Ponds Park, Cobbs Hill, Mt. Hope Cemetery, Highland Park, and the Finger Lakes are some of the local environments created by the movement of glaciers.



Vocabulary

Read More About It!

Douglas Macdougall

Frozen Earth : The Once and Future Story of Ice Ages
University of California Press, 2006

Ian Lange, Dorothy S. Norton
Ice Age Mammals of North America
Mountain Press, 2002

W. S. B. Paterson
The Physics of Glaciers
Butterworth-Heinemann, 1999

Jon Erickson
Ice Ages: Past and Future
Tab Books, 1990

Michael Hambrey
Glaciers
Cambridge University Press, 2004

Austin Post
Glacier Ice
University of Washington Press, 2000

Olga's History PROJECT: Page 1
<http://www.history.rochester.edu/class/rocks/olga.html#contents>

Rochester Geologic Timeline
www.vintageviews.org/vv-tl/timeline/geology.html

All About Glaciers
<http://nsidc.org/glaciers/story/>

Descent Into the Ice
http://www.pbs.org/wgbh/nova/teachers/viewing/3104_mtblanc.html

Fastest Glacier
<http://www.pbs.org/wgbh/nova/sciencenow/3210/03.html>

Climate - The weather in a location or region averaged over a long period of time. This includes such weather conditions as temperature, precipitation, and wind.

Glacial erratic - A piece of rock carried by glacial ice some distance from the rock outcrop from which it came. Erratics can range in size from pebbles to massive pieces

Glacial (washout) cave - A cave in or beneath a glacier that is formed when the ice at the bottom of the glacier warms, melts, and flows downstream.

Glaciers - A huge mass of ice slowly flowing over a land mass, formed from compacted snow in an area where snow accumulation is greater than snow melt.

Ice age - A cold period in time marked by episodes of extensive glaciation.

Ice sheet - A mass of glacial ice that is greater than 50,000 km² (19,305 mile²). The only current ice sheets are Antarctic and Greenland; during the last ice age) the Laurentide ice sheet covered much of Canada and North America.

Till - Glacial drift composed of an unconsolidated, heterogeneous mixture of clay, sand, pebbles, cobbles, and boulders.

Polarizing lens - Polarization only allows certain light waves to go through the lens, while the other waves just won't get through. By rotating the lens, different ranges of waves are let through, and we can see the details of ice crystals which reflect different light waves.