

In the Shadow of the BIG Ice

Lesson for the *Atlas of New York: Legacies of the Erie Canal*

Many features seen all over New York were created during the Ice Ages, which began around 2 million years ago, and ended only 9000 years ago. (In fact, we might be in between two ice ages!). The glaciers carved the landscape and they dumped material as they melted back into Canada. A bumpy ridge made of rock, sand, gravel, and clay that was deposited by a glacier is called a ***moraine***.

1. Look at the maps on page 6 of the *Atlas of New York: Legacies of the Erie Canal*.

They show two stages of the last Ice Age in New York. The first map is from _____ years ago, and the second from _____ years ago.

How can you tell just by looking at the maps that the first one is much older than the second? _____

2. At the end of this lesson are photographs of glacial features from different parts of New York State. The first photo shows a beach at Montauk Point State Park on the end of Long Island. It is near the "X" on the first map on atlas page 6.

Read the description. How was this *moraine* formed? _____

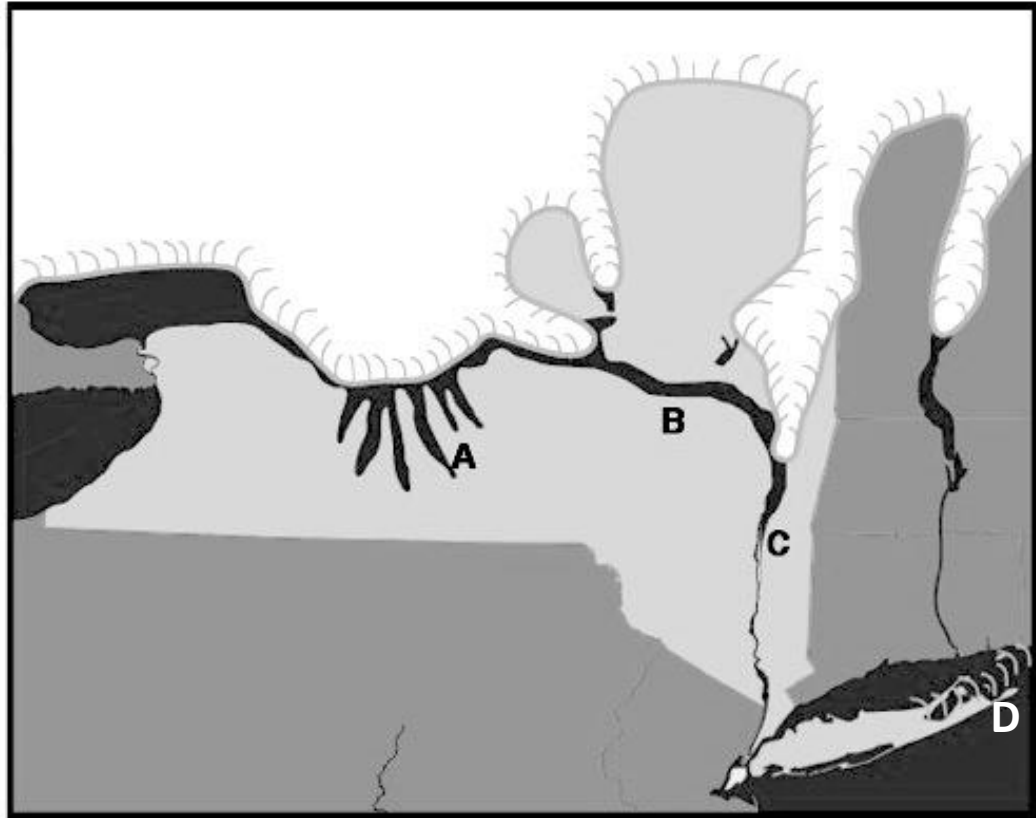
3. Now look at the second map. When the glacier was located here, it created another moraine, the **Valley Heads Moraine**. (The last photo shows this moraine near Naples, New York, south of Canandaigua Lake).

Why is the Valley Heads Moraine important to the Finger Lakes? _____

When the glaciers receded back, the melt waters rushed toward the ocean. They dug out some deep valleys still visible today. They are called ***spillover channels***. They are very important to the success of the Erie Canal. This is shown on the third map (p. 7 of the Atlas). The water from the melting (and receding glacier) has formed a lake in the same basin where Lake Ontario is found today. However, the glacier prevents the lake from draining into the St. Lawrence River, as it does today.

4. Instead, what route does it take? _____

Glacial Recession Map 10,000 years ago



5. Notice how wide these rivers were at the end of the Ice Age. At point B it created a deep valley used today by the Mohawk River and the Erie Canal. At point C the flooding created a valley that is at sea level, so the Hudson River here is an estuary, with tides. Match the photos on the next page to the four locations on this map. Write down their nicknames in the blanks.

A _____

B _____

C _____

D _____

Photos of New York State



The Wall of Dirt



“Hummocky” Hills



Cutting Through at Sea Level



The Pathway to the East