Overview of Glacier Lessons

During the days of Glacier-making, we covered the following:

• The multiple glacier events, focusing in on the Wisconsin Glaciation
  o Dates, maps, glacier characteristics (thickness, speed), etc…
• Erratics
• How Glaciers are formed
• Moraines
• Glaciation of Ohio – map coloring
• Kettle Lake Formation
• The Formation of the Great Lakes
• Post-glacier rebound

On glacier Day, stress the following:

• Your glacier only makes up a portion of the entire ice sheet – The Erie Lobe.
• Talk about what area your board represents
  o Where are the Great Lakes? Where do you live? Etc…
  You’re going back to 70,000 years ago and fast forwarding up to 14,000 years ago.
• Glacial retreat

Some possible follow up discussion questions:
In which direction do your striations run?
What type of moraine or moraines can you identify?
The rocks that are now in “Ohio” – where did they come from?
Glaciation of Northwest Ohio Activity

Goal/Objective: For students to understand the movement and deposits of glaciation.

SUPPLIES:
- 3 different colors of aquarium gravel- one small bag each
- Clear plastic cups (one/student)
- ~2 ft x 2 ft quarter-inch plywood or luan board (one/group)
- Wax, melted
- Trays large enough to accommodate boards (one/group)
- Freezer Space

PREP:
Boards:
- (Optional) Using a permanent or paint marker, draw a map of the present-day Great Lakes and any states or landmarks you wish to include.
- Melt wax and spread an even, thin layer over the entire surface of each board.

To create glaciers (4 days):
- Day 1: Each student adds ½ inch of water to his/her clear plastic cup. Freeze.
- Day 2: Cover ice with Gravel A. Cover with another ½ inch of water. Freeze
- Day 3: Repeat Day 2 with Gravel B.
- Day 4: Add a layer of Gravel C to the top of the ice. Add just enough water to cover the gravel about half way. Freeze.

LESSON:
1) Each group gathers their glaciers, one board, and one tray.
2) Place board within the tray, one edge of the board propped up on an edge of the tray to create a slight incline.
3) Each student flips their glacier out of the cup onto the top, “northern” part of the board. The bottom most portion of the glacier is now the top.
4) Students scrape their glaciers along the board (landscape) in a northern to southern direction.
5) Observe the striations the bottom most gravel makes in the wax. Compare these to real-life glacier striations.
6) Allow the glaciers to sit and melt overnight.
7) Observe and discuss the location, patterns and colors of gravel. Discuss how this relates to the landscape, moraines, and local rock/gravel/soil composition.