



ICEPOD'S BERGY BITS ACTIVITIES ~ Fun with Ice: Its Simple Physics!
CONCEPT: Channel Friction Affects Flow

IcePod is a packet of instruments collecting highly detailed and accurate images of the polar ice sheets. 'Bergy Bits' are simple activities that introduce science concepts through student experimentation, tying these concepts to real glacier physics. Named for small pieces of ice found in both the Arctic and Antarctic, 'bergy bits' in nature are small pieces of floating ice that break from an iceberg, ice shelf or glacier.

What is Friction? Friction is one surface or object rubbing against another. Friction always slows a moving object down.

Gather Activity Supplies – see supplies sheet for Bergy Bits activities

Glacier Channel Ice Flow Activity:

- Place the matted grid board in the plastic box to create a ramp
- Create a channel for the glacier goo to flow through by taping rolled foil to the laminated grid on the matboard.
- Mound the glacier goo to fill across the top region of the foil frame.
- Draw a straight line is sketched horizontally across the surface of the goo photo (1).
- Make a prediction: Will the center or the edges flow faster? If the center flows faster the line will become a smiley face, if the edges flow faster it will be a frown. Let the glacier flow.

Note: Do not let students see picture (2) or (3) until the end of the activity



1) Position the glacier goo and draw a straight line across the face.

2) Observe: what happens to the straight line.

3) Real world photo of a glacier on Ellesmere Island, NW Canada.

Describe your observations:

- 1) What happened to the straight line you drew across the goo, smile or frown?
- 2) What part of the glacier is flowing the most quickly?
- 3) Where there is friction it slows down the ice. Where is the 'friction' in this activity?
- 4) Look at image 3. This is a glacier on Ellesmere Island, Canada just across Baffin Bay from Greenland. Think of the glacier goo, what part of this glacier do you think is flowing the fastest?