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

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.

Glacier Channel Ice Flow Activity:
Set up includes creating a channel for the glacier goo to flow through by taping rolled foil to the laminated grid on the matboard. Students mound their glacier goo to fill across the top region of the foil frame. Using a marker a straight line is sketched horizontally across the surface of the goo (frame 1). Let the glacier flow without disturbance.

Describe your observations:

1) What happened to the glacier goo?
2) What happened to the straight line you drew across the goo?
3) What part of the glacier is flowing the most quickly? _______ Explain why you answered this way.
4) Where is the 'friction' in this activity?
5) Look at image 3. This is a glacier on Ellesmere Island, Canada just across Baffin Bay from Greenland. How does what you observed with glacier goo relate to this glacier?

IcePod: www.ldeo.columbia.edu/icepod
More Activities: www.ldeo.columbia.edu/polareducation