



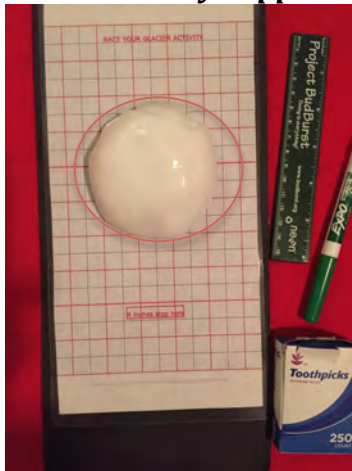
Lamont-Doherty Earth Observatory  
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## IcePod's Bergy Bits Activities ~ Fun with Ice: Its Simple Physics! CONCEPT: Gravity Drives Ice Flow

*IcePod* is a packet of instruments collecting highly detailed and accurate images of the polar ice sheets. '**Bergy Bits**' are simple activities introducing 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 Gravity?** Gravity is a force of attraction between two objects. It acts like a magnet pulling objects together. The Earth has gravity pulling objects towards it. Earth's gravity causes the ice in a glacier to flow downhill. Even when the surface seems flat, mounded ice flows from where it is highest to where it is lowest/thinnest

**Gather Activity Supplies** – see supplies sheet for Bergy Bits activities



1) Place the matboard flat on a table and pile goo in the center. Use erasable marker to draw a circle around the goo. What do you think – will the goo stay inside the circle or not? Why?



2) Kangerdlussuaq glacier flowing from the center of the icesheet to the Greenland coast.



3) Helheim glacier flowing from the center of the icesheet to the Greenland coast.

### **Glacier Gravity Activity:**

Students lay the matboard flat on the table and mound their glacier goo in the middle of it. Draw a circle around it. Predict what will happen to the goo.

### **Describe your observations:**

- 1) What happened to the glacier goo? Did it stay inside the circle?
- 2) The matboard is lying flat, so what is causing the glacier goo to flow moving the goo outside of the circle (hint: see the notes above in 'What is gravity?')
- 3) Images (2) Kangerdlussuaq and (3) Helheim are real glaciers on the southeast coast of Greenland. Look at the ice in the photos. How do you think the activity you did relates to these real glaciers moving in the polar-regions?