

Glaciers Galore

Did you know a glacier is made up of moulins, eskers, moraines, and crevasses? Create a 3-D model to explore how many years of fallen snow are compressed into a large, thick mass of ice.

TEKS:

- 3.7C Identify and compare different landforms, including mountains, hills, valleys, and plains.
- 4.7B Observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.

How To:

1. Download a cut-out 3-D model of the Icelandic glacier from the following website: <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/iceAge/glacierModel.html>
2. Print the two pages on to heavy weight paper such as card stock
3. Cut around the two parts of the model
 - a. Base:
 - i. Cut out the curve in the middle of the base (it is easier if you push a pen tip through it first and make a hole to begin the cut)
 - ii. Fold along the thick black lines
 - iii. Glue tabs to make up the model like a box lid
 - iv. Allow to dry
 - b. Glacier Snout (the end of the glacier):
 - i. Cut around the image
 - ii. Fold tabs backwards
4. Glue the glacier snout to the base (glue the top to the back before gluing the bottom to the base)

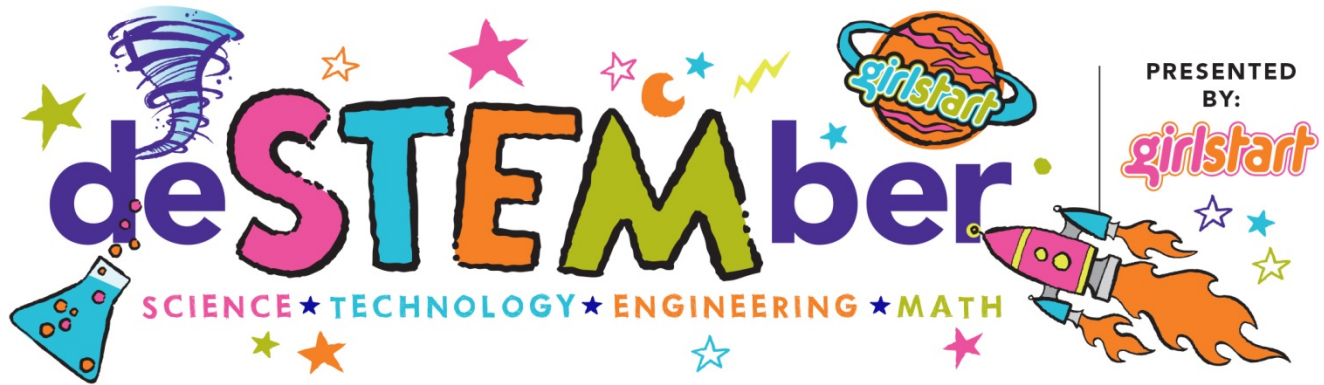
Materials:

- Scissors
- Glue stick
- 2 sheets of heavy weight paper (such as white card stock)
- 1 cut-copy of the 3-D Icelandic Glacier Model

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Why Does It Work?

Glaciers make up 10% of the world's total land area and are the largest reservoir of fresh water on Earth. Additionally, they have the ability to move and flow like a slow river of ice. As the Earth continues to get warmer, the glaciers begin to shrink by melting, which directly influences variation in sea level.

In your model you can explore the different parts that make up a glacier including moulins, eskers, moraines, and crevasses. A moulin is a vertical cavity worn in a glacier by surface water. An esker is a long narrow ridge that marks the former location of a glacial tunnel. Moraines are linear accumulations of rocks and sediment that are deposited at or near the edges of a glacier. A crevasse is a deep crack in a glacier.

Career Connection:

Geomorphologists study landforms and the processes that shape them. Scientists in that field seek to understand why landscapes look the way they do, to understand landform history and dynamics, and to predict future changes through a combination of field observations, physical experiments, and modeling.

Resources:

- <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/iceAge/glacierModel.html>
- <http://www.neok12.com/Glaciers.htm>
- <http://www.enchantedlearning.com/geology/glacier/index.shtml>

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