

GLACIER BASICS

- 1) Glaciers form over hundreds of years in places where annual snowfall does not melt. Over time new snow presses down the old snow compressing it into large masses of ice.
- 2) Glaciers are constantly in motion as the ice “flows”, like very slow rivers.
- 3) Glaciers have a lot of force when they move. They can push rocks, gathering them as they move and leaving them behind when they melt back. Large rock collections left behind by a glacier can be massive, in fact Long Island, New York is a glacial moraine!
- 4) As glaciers flow they change the Earth below them. Large glaciers can even form large valleys in the Earth surface! Ice can also polish the Earth below leaving it smooth, it can also pick up rocks, even large boulders, and drag them along with the force of its movement. This can leave scratches in the rocky surface of the Earth below which can tell us later how a glacier moved in an area.
- 5) Glaciers are an important source of water for many places on Earth. They hold 75% of the world’s fresh water! Since all of Earth’s water is part of a cycle the water in your glass might once have been in a glacier, or part of an ice sheet! Think about it!!
- 6) As snow forms into glaciers, oxygen is pressed out making the glacier appear blue in color due to light absorption. It is the air trapped in snow particles that makes them appear white.
- 7) Today, glaciers cover around 10% of the Earth’s land and are in every continent except Australia! During the last ice age they covered almost a third of the land!
- 8) The fastest flowing ice on Earth today is in Greenland, a glacier called Jakobshavn (Danish name) or Ilulissat (Greenlandic name) Glacier. Sommer flow has been measured at up to 113 ft. (more than 34 meters) a day! In Antarctica one of the fastest flowing glaciers is Pine Island Glacier, flowing at rates of 33 ft (10 meters) a day in the summer.
- 9) The largest glacier is Lambert Glacier, in East Antarctica, it is ~ 62 miles wide (100km), 250 miles long (400km) and 1.5 miles deep (2.5km)!
- 10) Large amounts of glacial ice press together to form large continental sized ice sheets. There are two ice sheets left on Earth today – one covering Greenland in the north and one covering Antarctica in the south.
- 11) Glacial ice can be hundreds of thousands of years old, which makes it a tool for telling us about past climate! Scientists can collect ice cores (tubes of ice) to look into the past!