



# GLACIERS ANTICIPATION GUIDE

Read each statement and decide if it is True or False. Complete the left column before the reading by circling the T for True or the F for False. Complete the right column after you finish the reading. Did any of your answers change?

BEFORE READING		STATEMENT	AFTER READING	
T	F	Less than 10% of the world's land area is covered by glaciers.	T	F
T	F	There are no glaciers in North America.	T	F
T	F	The two categories of glaciers are Alpine and Continental.	T	F
T	F	An ice sheet is a large, thin mass of ice that covers a large area.	T	F
T	F	Most Continental glaciers were created during the Ice Age.	T	F
T	F	Due to friction, the top of a glacier moves slower than the bottom.	T	F
T	F	Alpine glaciers are smaller than Continental glaciers.	T	F
T	F	When glaciers move faster than normal, it is called a glacial surge.	T	F
T	F	A glacier only moves about 100 feet per year.	T	F

**DID YOU KNOW?**

The Bering Glacier in Alaska is 25 miles long.

# Glaciers

Name: \_\_\_\_\_

Answer the questions below. Then on the coloring page, color each numbered section with the corresponding color. If there is any space left over, color it your choice! Follow the directions provided to cite evidence from the reading.

Questions	Text Evidence	Answer
#1 What is a scientist who studies glaciers called?	Find proof in the reading and <u>UNDERLINE</u> it in <b>PURPLE</b>	Glaciologist RED
#2 What percent of Earth's freshwater is stored in glaciers?	Find proof in the reading and <u>CIRCLE</u> it in <b>GREEN</b>	25 BLUE STRIPES
#3 What term is used to describe when a chunk of ice breaks off a glacier?	Find proof in the reading and <u>BOX</u> it in <b>RED</b>	Breaking ORANGE
#4 What are giant, elongated blocks of ice called?	Find proof in the reading and <u>BOX</u> it in <b>YELLOW</b>	Crevasse ORANGE
#5 What are the scratches formed by a moving glacier called?	Find proof in the reading and <u>CIRCLE</u> it in <b>ORANGE</b>	Crevasse BROWN
#6 The high, central portion of an ice sheet is called what?	Find proof in the reading and <u>UNDERLINE</u> it in <b>PURPLE</b>	Dome GREEN STRIPES

called the zone of accumulation. Glaciers are the largest sources of freshwater on Earth. 75 percent of the world's fresh water is stored in glaciers. Greenland is a giant ice cap with ice that is 2 miles thick! The ice sheet can be so heavy that they can bend the continental crust of the earth.

There are many different types of glaciers. A calving glacier is usually a body of water. If that body of water has tides, then that glacier can be called a tidewater glacier. When a chunk of ice breaks off a glacier it is called "calving".

When a chunk of ice floats in the water it is called an iceberg. About 10,000 to 15,000 icebergs are calved each year.

Animals such as polar bears, seals and walruses use icebergs as a place to rest and hunt for food. Polar glaciers form in an area where the temperature is always below freezing.

Cirque glaciers form on the slopes of mountains. An ice cap is formed when ice completely covers an area of land. Scientists can drill into an ice cap to collect a cylinder of ice called an ice core. The ice core can be studied to provide a history of the Earth's climate.

Ablation is the melting, erosion, and evaporation of a glacier that reduces the amount of ice. When glaciers move they can change or erode the land around them forming features like fins, horns, or drumlins.

Moraine is rock and debris deposited on the side or the ends of an ablating (melting) glacier.

Crevasses are giant, elongated cracks in the ice that occur on the surface of the glacier. Usually, crevasses form in the area where the glacier is moving the fastest.

As the glaciers move they grind against the earth and can carve out valleys. Basal sliding is when the bottom of a glacier slides over bedrock. The high, central portion of an ice sheet is called the dome. Striations are scratches formed by a moving glacier.