Glaciers

What is a Glacier?

- A glacier is a large and solid body of ice and snow, which could survive for thousands of years.
- Most glaciers form in mountains because the higher altitudes are colder and more likely to collect precipitation.

Study Tip

About 99% of all glacial ice is located in the polar regions, namely Antarctica and Greenland.

Types of Glaciers

Continental Glaciers	Large, flat glaciers that flow outwards from the greatest reserves of snow and ice.
Alpine (Valley) Glaciers	Glaciers that typically flow downwards and consist of snow that collects from the sides of valleys.
Ice Caps	Glaciers that cover more than a valley, possibly a mountain range or a large region.

Glacier Growth

Most glaciers rest on the top of mountains because that is where most of the ice and snow in a glacier accumulates.

- When more snow falls and collects in the **zone of accumulation** than is melted in the **zone of ablation**, a glacier will grow.
- Snow compacts itself and becomes glacial ice after reaching a high density.
- A glacier can move based on its size, the steepness of the slope, and the roughness of the ground it's on.
- **Crevasses**, or cracks in a glacier can as a result of movement. The crevasse at the top of a mountain where stuck ice separates from moving ice is the **bergshund**.
- A glacier becomes an **ice sheet** if it no longer moves.

Concept Check

- Can you predict how a glacier can start to form?
- What are the different types of glaciers, and how are they different?
- Can you list how a glacier can grow or move over time?

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