



Figure 12
Continental glaciers and valley glaciers are agents of erosion and deposition. This continental glacier covers a large area in Antarctica.

Continental Glaciers

The two types of glaciers are continental glaciers and valley glaciers. Today, continental glaciers like the one in **Figure 12** cover only ten percent of Earth, mostly near the poles in Antarctica and Greenland. These continental glaciers are huge masses of ice and snow. Continental glaciers are thicker than some mountain ranges. Glaciers make it impossible to see most of the land features in Antarctica and Greenland.

Reading Check

In what regions on Earth would you expect to find continental glaciers?

Climate Changes In the past, continental glaciers covered as much as 28 percent of Earth. **Figure 13** shows how much of North America was covered by glaciers during the most recent ice advance. These periods of widespread glaciation are known as ice ages. Extensive glaciers have covered large portions of Earth many times over the last 2 million to 3 million years. During this time, glaciers advanced and retreated many times over much of North America. The average air temperature on Earth was about 5°C lower during these ice ages than it is today. The last major advance of ice reached its maximum extent about 18,000 years ago. After this last advance of glaciers, the ends of the ice sheets began to recede, or move back, by melting.

Figure 13
This map shows how much of North America was covered by continental glaciers about 18,000 years ago. Was your location covered? If so, what evidence of glaciers does your area show?

