# Glaciers on earth’s surface. so, in this

Countries, Canada

Glaciers are thick masses of ice that change Earth’s surface. One type of glacier, a continental glacier, or ice sheet, is an enormous mass of ice that flows in all directions from one or more centers. Today, continental glaciers cover about 10 percent of Earth’s landscape, where the climate is extremely cold. Thousands of years ago, however, these glaciers were more extensive than they are today.

At one time, these thick sheets of ice covered all of Canada, portions of Alaska, and much of the northern United States. The impact that these ice sheets had on the landscape is still obvious today. Landforms produced by continental ice sheets, especially those that covered portions of the United States, are mostly depositional in origin. Recall that there are two types of glacial deposits.

Stratified drift is sediment that is sorted and deposited by glacial meltwater. Till is unsorted sediment deposited directly by a glacier. Moraines are ridges of till deposited as a glacier melts and recedes. Ground moraines are gently rolling plains of rocks and other glacial debris. Ground moraines can fill low spots and result in poorly drained swamplands. End moraines are deposits that form along the end of a melting glacier.

An outwash plain is a ramp-like accumulation of sediment downstream from an end moraine. Kettles are glacial features that form when blocks of stagnant ice become buried and eventually melt. Drumlins are streamlined hills that are composed of till. In this investigation, you will use a topographic map to examine some of the features produced by continental glaciations. Remember that a topographic map is a map that shows a bird’s-eye, or top

view of an area. Contour lines on a topographic map connect points of equal elevation. The difference in elevation between adjacent contour lines is the contour interval. Closely spaced contour lines indicate a steep slope, while contour lines that are farther apart indicate a gentle slope.

A scale shows how horizontal distances on the map are related toactual distances on Earth’s surface. So, in this investigation you will find out how continental glaciers change Earth’s topography.