

GLACIATION OF CANADA

- 1a. GLACIAL ICE is different from regular ice because it is harder and thicker and the crystals are more compact. It can also move like a thick liquid.
 - b. GLACIAL ACTIVITY begins with a cooling of the atmospheric temperatures, and the snow that falls in the winter does not completely melt in the summer.
 - c. Over thousands of years, the snow gets deeper and becomes hundreds of meters thick, with the bottom layer becoming icy.
 - d. ALPINE GLACIERS are in mountainous regions and move from high elevations to low elevations by gravity. It is usually only a few centimeters a day. CONTINENTAL GLACIERS, or ice sheets, move under their own weight. Because they are so large, their own weight pushes out the edges.
- 2a. During the last ice age, the parts of the earth that were covered by ice sheets were almost all parts of Canada and the United States, Europe and South America.
 - b. The ocean levels fell well below the current levels because there was so much of the earth's water frozen in the ice sheets.
4. The alpine glacier shapes the mountains by sharpening its top and scraping away some of the rock on the sides of the mountain. It reaches a valley and widens its sides, making a V-shaped valley into a U-shaped valley.
The continental glaciers smooth the land and erode high points and fill in low points with eroded materials.

5.

Feature	Formation?	Appearance?	Uses
Striations	Gouges by the glacier and the rocks underneath it	Grooves running along a stretch of bedrock	Tells the direction of the glaciers.
Spillways	Meltwater created paths in the soil and rock	Deep widened valleys	Can provide info on glacial movement and for streams
Till plains	Till deposited under ice	Gently rolling landscape	Growing crops
Moraines	Till deposited at edge of glaciers	Ridges of swampy and hilly ground	Forestry and grazing animals
Drumlins	Material deposited in clumps	Egg-shaped hill, steep on one end and wide on other	Farming and growing crops
Erratic	Moved by a glacier	Large rock that does not match the bedrock of its area	Tells what region the rock came from and movement of glacier
Eskers	Follows path of river that created it;	Steep sided ridge	Source of sand and gravel
Lake plains	Pooling of glacial melt water at the edge of a glacier	Flat regions, some have sand dunes and beaches far above sea level;	Farming and source of fine clay

6. Through observation of the deposited materials, the glacial deposits are often in large groups or hills, with large amounts of materials; the meltwater carries smaller amounts and they are usually rounded and eroded by the water movements.

8. Formation of:
 - a. Spillway: large quantities of glacial melt water carved out deep valleys in the ground; where there was a break or crack in the glacier, or underneath it in a pathway;

 - b. Kettle Lake: result of large blocks of ice that were left behind by a retreating glacier; these block melted and filled a depression in the ground;

 - c. Shorelines (glacial lakes): edges of ponds that were created in lake plains by the glacial melt water; formed by the eroding forces of the melt water;

- 9a. The use of paintings is a useful way of studying geography because the artist sees the landscape and all its shapes. Geographers can see the landscape in a different way and can see the uses of the land as the artist sees it.

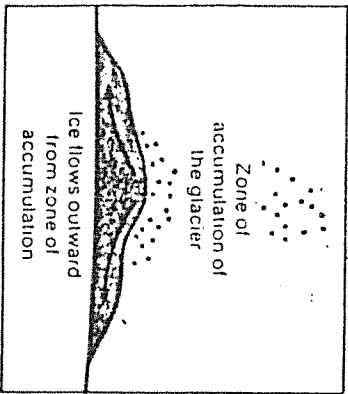
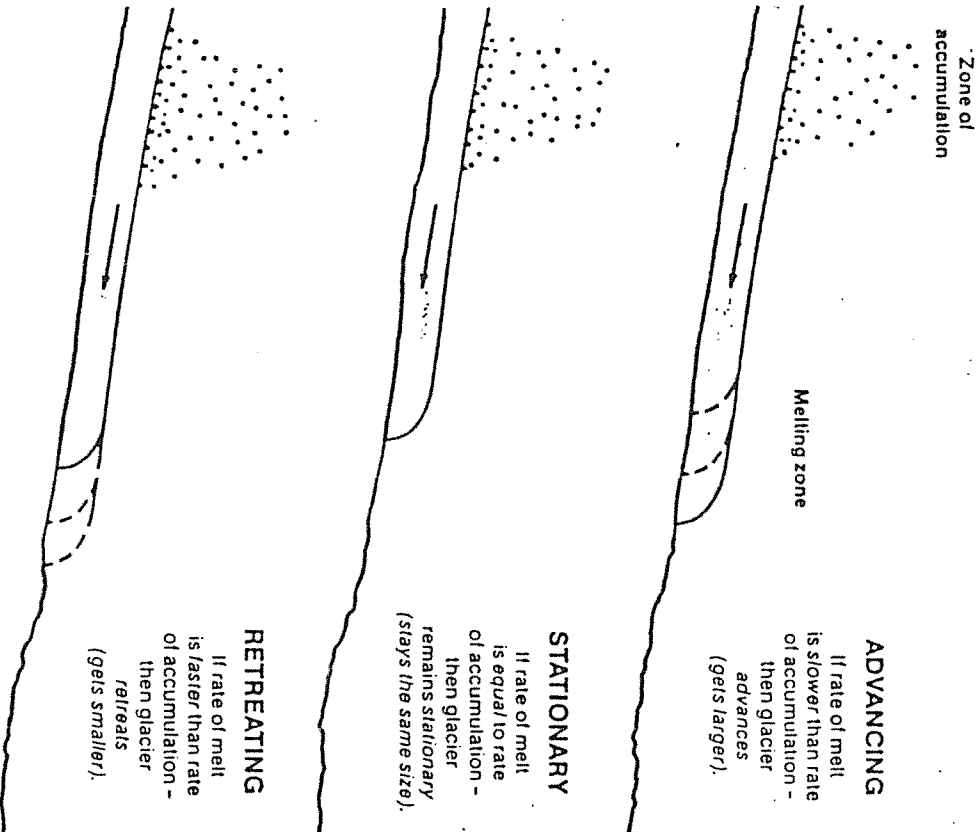


Fig. 36-1 How a glacier moves

Fig. 36-2 Advancing, stationary and retreating glaciers



GLACIAL DEPOSITS

