Continental Glaciers vs. Alpine glaciers

Continental glaciers cover parts of continental land masses like Greenland but,

Alpine glaciers are found high in mountain valleys, above the snow-line.

Differences:

Location; Alpine glaciers are only found on mountain tops but continental glaciers are only found at the earth's poles regardless of elevation.

Size; Alpine glaciers are smaller compared to Continental glaciers.

Similarities:

Both move and cause erosion ; Both change the landscape

Both developed in constantly cold temperatures below freezing.

Land Forms Created by Continental Glaciers

Outwash plain: Like a river Delta ,Melt water flowing from glacier deposits silt like river deltas. Silt is deposited in layers (sorted by the glacial water) Small particles are carried further away, larger ones closer

Terminal Moraine: Heap or ridge of bulldozed gravel that marks the end of the forward motion of a glacier. As a glacier retreats it deposits debris/gravel

Erratics: Large boulders that were transported long distances and dropped.

They now sit in a region and look very much out-of-place.

Drumlins: Whale shaped hill , Formed under glaciers , Sloped or Pointy end points in direction of ice flow

Eskers: Long deposits of eroded glacial material, Formed by sub-glacial rivers that deposit material like all rivers.

Evidence for Direction of Glacier Movement

The gently sloped end of **drumlins** point in the direction of movement.

The **terminal moraine** marks the furthest extent of the glacier.

The layers of silt in an **outwash plain** can indicate direction of glacier movement (fine particles would be at the leading edge while larger particles would have been closer to the glacier).

Alpine Glaciers

Alpine glaciers are very slow moving rivers of ice flowing down high mountain valleys. Like continental glaciers, they create land forms by weathering and deposition.

Cirque: a circular hollow cut into bedrock during glaciation

Arête: Steep knife edged ridge between two cirques in a mountainous region.

Hanging Valley :A high level tributary valley from which the ground falls sharply to the level of the lower, main valley.

Lateral Moraines: a moraine deposited at the side of a glacier

Terminal Moraines: deposits that mark the farthest extent of the alpine glacier the same as with continental glaciers.

Fjords : Alpine Glaciers erode troughs & valleys in the mountain, Glacier valley reaches the coast and Glacier melts and sea water floods the valley