**LESSON NOTE WEEK 9**

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| **ACTION OF WIND**  Action of wind is dominant in the desert and other semi-arid regions of the world as deserts have little or no vegetation. Dryness or aridity in deserts are caused by low rainfall, high temperature, cold currents and high evaporation.  Wind Erosion  The processes of wind erosion include   1. **Deflation:** the lifting and blowing of loose sand pebbles by wind and results in lowering of the land surface to form a large depression called deflated hollows 2. **Abrasion :** sand particles carried by the wind are used to blast or wear away rock surfaces 3. **Attrition:** materials carried by wind collide with one another leading to further wearing away of each other.   **FEATURES OF WIND EROSION**  **rock pedestal  zeugen**  **yardang**   1. Rock Pedestals: irregular in shape formed by wind abrasion on alternate horizontal layers of hard and soft rocks. They are like pillars in structure. Example is mushroom rock. 2. Zeugen: tubular masses with a layer of soft rocks lying beneath a surface layer of hard rock. They are formed by wind abrasion in desert when the mass rock is attacked and then wears the mass into a ridge and furrow landscape. Mechanical weathering starts the formation and opening up joints of the surface of hard rocks. 3. Yardang: they are formed when hard and soft rocks in vertical bands are aligned in the direction of the prevailing wind. 4. Mesas and Buttes: a flat, table-like landmass made up of resistant top layer and soft layers below. It is formed as a result of denudation action.      1. Isenberg: an isolated rocky outcrop having steep sides, round top and composed of granite. It is caused as a result of weathering and removal of weathered materials by water and wind. 2. Deflation hollows or Depression: formed as a result of wind deflation which produces large hollows as a result of scooping away of loss sandy materials by wind.     **FEATURES OF WIND DEPOSITION**   1. Dunes: sand ridges formed by the piling up of sand into hill- shape by the action of wind. Dunes are classified into 2 types;      1. *Barchans*: moon shaped structure that may occur in a group or single. They are formed when an obstacle like roc prevent the movement of wind resulting in accumulation of sand materials 2. *Seits or longitudinal dunes*: sword shaped 3. Loess: these are loss sand particles which are carried by wind and deposited outside the desert as fertile and porous loess. |

**LESSON NOTE WEEK 10**

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| **ACTION OF GLACIER**    The action of glacier as an important agent of erosion, transportation and deposition of materials is confined to mountainous and temperate region of the world. E.g. North and South America, Europe, Asia, Mountain Kilimanjaro, Mountain Kenya etc.  TERMS ASSOCIATED WITH GLACIERS   1. Ice: this refers to solid form of water resulting from freezing water when temperature is persistently below 0 degrees Celsius 2. Glacier: large accumulation of ice in motion 3. Glaciation: refers to the wearing away of the earth surface by glacier. 4. Snow: frozen water vapor which falls in crystal form through the atmosphere.   **ACTION OF GLACIER EROSION**  Glacier erosion is carried out in the following ways:   1. Sapping: the breaking up of rocks due to alternate freezing and thawing of water at the bottom of cracks between a mass of ice and the side and floor of a valley or side of the mountain. 2. Plucking: the tearing away of blocks which become frozen on the side or bottom of a glacier 3. Abrasion: the wearing away of rock beneath a glacier by the sourcing action of the rocks embedded in the glacier.   EROSIONAL FEATURES OF GLACIER IN HIGHLANDS     1. Striations: marks or scratches left on rocks over which glacier passes rock fragments. 2. Corries or Criques: deep and rounded hollow/depression with steep sides formed through erosion by ice 3. Arête: occurs when two corries cut opposite sides of the same mountain, resulting in a knife-edge ridge arête. It is therefore a wall separating two cirques. 4. Pyramidal peak 5. U-shaped Valley or Trough: a wide flat floor with floor with very steep side which has been eroded by glacier. 6. Others include; Hanging valley, Rock basin, Moraines.   EROSIONAL FEATURES OF GLACIER IN LOWLAND   1. Roche Moutonne: resistant residual rock structure with surface that is striated by ice movement. 2. Crag and Tail: crag is a mass of hard rock with slopes on the stream side that protect the softer leeward slope from erosion and later develops to form the tail.   FEATURES OF GLACIER DEPOSITION IN LOWLAND   1. Boulder clay: consist of stones of various sizes and shapes in a mass of sandy clay      1. Erratics: transported rock fragments which are composed of materials entirely different from the bedrock of rock fragments of the region in which they are deposited.      1. Drumlins: composed of maily boulder clay with their elongation in the direction of ice. 2. Eskers: long winding ridges of sand and gravel deposited by melting water streams 3. Terminal Moraines: boulders deposited at the edge of the ice sheet. 4. Outwash plain: areas beyond the terminal moraines in sand and gravel washed down the mountainous zone and deposited in an extensive area.     **ECONOMIC IMPORTANCE OF GLACIER FEATURES**   1. Outwash plain provide a conducive gentle topography for settlement agriculture and constitution of route ways 2. Melting glaciers supply valuable fresh water for the world’s water bodies 3. Hanging valleys have given rise which descend on the main valley in form of water fall which can be tapped to produce Hydro Electric Power. 4. Some peculiar or spectacular features which have resulted from glaciations have become important tourist attractions |