

FIRST TERM E-NOTE (2024/2025 session)

SUBJECT: GEOGRAPHY

CLASS: SS2

SCHEME OF WORK

WEEK TOPIC

1&2	REVISION/ACTION OF RUNNING WATER
3	ACTION OF WIND
4	ACTION OF GLACIER
5	ACTION OF WAVE
6	CLIMATE
7	CLASSIFICATION OF CLIMATE
8	ENVIRONMENTAL RESOURCES
9	RENEWABLE AND NON-RENEWABLE RESOURCES
10	ENVIRONMENTAL PROBLEMS
11	REVISION

REFERENCE MATERIAL

- Essential Geography for Senior Secondary Schools, O.A. Iwena.

WEEK ONE AND TWO ACTION OF RUNNING WATER (RIVER)

Running water is one of the most important agents of denudation. Rivers are involved in erosion transportation and deposition of materials.

TERMS ASSOCIATED WITH RIVERS

- (1) **Source of a river:** The source a river refers to where a river starts or begins, usually around highlands.
- (2) **Course of a river:** This refers to the path or channel through which the river flows.
- (3) **Mouth of a river:** This is where the river ends or where it enters into the sea, ocean or lake.
- (4) **River basin or catchment area:** It refers to all the areas drained by a river and its tributaries.
- (5) **Water shed or water divide:** It is the highland area which separates two or more rivers or two river basins. It is from the watershed that rivers take their sources.
- (6) **River regime:** This refers to the seasonal changes in the volume of water in a river in a year. It could be single regime where there is one period of high volume and one period of low volume and double regime where there are two distinct periods of high volume of water in a year. Knowledge of a river regime is important to man in controlling floods, storing up water for irrigation and human consumption and also for planning H.E.P production.
- (7) **Confluence of a river:** This refers to the meeting point of two rivers.
- (8) **Tributaries:** These are smaller rivers or streams that join together to form a larger river.
- (9) **Distributaries:** These are channels formed by the division of a river as it flows into the sea. They are usually found in the delta region of a river.
- (10) **River energy:** It refers to the velocity of a river. The efficiency of a river to erode and transport the eroded materials depends very much on its velocity.

FACTORS AFFECTING THE VELOCITY OF A RIVER

- (a) The volume of water released.
- (b) Slope of the river valley.
- (c) Shape of the river valley.
- (d) Amount and size of materials.

STAGES OF A RIVER

The entire length, valley or course of a river is divided into three main stages.

- (1) The upper course or mountain course (Youthful stage).
- (2) The middle course or valley course (Mature stage).
- (3) The lower course or plain course (Old stage).

UPPER COURSE OF A RIVER

CHARACTERISTICS OF UPPER COURSE OF A RIVER:

- (a) It marks the beginning or source of a River.
- (b) It is found around highland areas.
- (c) It has steep sides.
- (d) The river flows swiftly down the steep slope.
- (e) The dominant work of the river is vertical corrosion or erosion.

PROCESSES OF RIVER EROSION

The load or materials carried by a river are the main agents of erosion, but the erosive work of a river consist of four processes. These are:

- (a) **Hydraulic action:** In this process, fast flowing water forces itself into cracks and joints within the valley under pressure and enlarges the cracks.
- (b) **Corrosion:** Corrosion is the wearing away of the sides and floor of the river with the aid of sand, pebbles, silts and boulders which are being transported. These materials eventually widen and deepen the river valley.
- (c) **Attrition:** This is the wearing down of the load as they collide with one another and with the floor and side of the valley. Large boulders are broken down into small pieces like pebbles.
- (d) **Solution:** This refers to chemical action of water on materials it comes in contact with while flowing. Here, rock salt is dissolved and carried away in solution.

FEATURES OF UPPER COURSE OF A RIVER

- (a) V-Shaped Valley
- (b) Gorge
- (c) River Capture
- (d) Rapid and Cataracts
- (e) Waterfall

MIDDLE COURSE OF A RIVER

Characteristics of Middle Course of a River

- (a) Lateral erosion is dominant over vertical erosion, resulting in widening of the river valley.
- (b) There is increase in the volume of water due to addition of more water from tributaries.
- (c) There is increase in the load of the river.
- (d) The work of the river is mainly transportation with little deposition.

PROCESSES OF RIVER TRANSPORTATION

The load of a river is carried or transported along the course of a river through four main processes. These are:

- | | |
|---------------|----------------|
| (a) Solution | (b) Suspension |
| (c) Saltation | (d) Traction |

FEATURES OF MIDDLE COURSE OF A RIVER

- (a) Wide V- shaped Valley
- (b) Meander
- (c) River Cliff and Slip – off Slopes
- (d) Interlocking Spur

LOWER COURSE OF A RIVER

CHARACTERISTICS OF THE LOWER COURSE OF A RIVER

- (a) The main work of the river is deposition of materials.
- (b) There is active lateral erosion.
- (c) There is lowering of the gradient of the valley floor.
- (d) There is drastic reduction in the speed of the river.

FEATURES OF LOWER COURSE OF A RIVER:

- (a) Flood plain
- (b) Levees
- (c) Ox-bow lake
- (d) Braided river
- (e) Delta

DRAINAGE PATTERN

A river system which includes the main river and its tributaries may develop certain patterns from their basin and the types of drainage patterns include:

- (a) **Dendritic drainage pattern:** In this type, the tributaries called the subsequent rivers join the main river called the consequent river at oblique angle. It is a tree like structure i.e. like branches of a tree which develop on homogenous rocks of bed.
- (b) **Trellised drainage pattern:** This is formed due to the alternate layers of hard and soft rocks, resulting in the tributaries following the pattern of the rock structure and at right- angle to the main river in form of rectangular shape.
- (c) **Radial drainage pattern:** The streams or tributaries flow outward and down the hill thus given rise to a radial drainage pattern like the shape of a bicycle wheel.
- (d) **Centripetal drainage pattern:** In this type, many rivers or streams flow from different directions into a lake.
- (e) **Annular drainage pattern:** The main stream or river almost form a concentric ring around a highland i.e it almost flows round or encircles a hill.

IMPORTANCE OF RIVERS

- (1) Medium of transportation.
- (2) Generation of hydro-electric power (H.E.P) where rapids and waterfalls exist.
- (3) It Provides water for irrigation purposes.
- (4) Provision of water for domestic and industrial purposes.
- (5) Formation of flood plain by rivers also provides fertile soil for agricultural activities.
- (6) Rivers provide food e.g. fish, prawns, crabs, etc.
- (7) It provides employment to many people e.g. fishermen and canoe builders.
- (8) Some rivers act as political boundaries between states, regions and nations.
- (9) Some rivers are centers of tourist attraction and may generate foreign exchange.

READING ASSIGNMENT

Essential Geography, O.A. Iwena, *Pages 51-58.*

WEEK THREE

ACTION OF WIND IN THE DESERT

The action of wind is dominant in desert and other semi arid regions of the world. Deserts are places with little or no vegetation. Deserts which are associated with aridity (dryness) are caused by low rainfall, high temperature, cold currents and high evaporation rate. Examples of Deserts are:

- (i) Sahara desert (West Africa).
- (ii) Kalahari and Namib deserts (South Africa).
- (iii) Arabian, Iranian and Thar deserts (Middle East).
- (iv) Australian desert (Australia).
- (v) Atacama desert (South America).
- (vi) Mohave desert (U.S.A).

CHARACTERISTICS OF DESERTS

- (i) Extreme of Temperature.
- (ii) Low rainfall.
- (iii) Absence of vegetation cover.
- (iv) High evaporation rate.
- (v) Wind action is dominant.
- (vi) Presence of cold currents.

TYPES OF DESERTS

There are five distinct kinds of deserts

1. Erg or Sandy desert
2. Hamada or rocky deserts
3. Reg or stony deserts
4. Badlands
5. Mountain deserts

ACTION OF WIND EROSION

Wind erosion is carried out in the following ways:-

1. **Deflation:** This is the lifting and blowing of loose sand and pebbles by wind. Deflation results in the lowering of the land surface to form large depression called **Deflation hollows**.
2. **Abrasion:** This is the process whereby sand particles carried by wind are used to blast or wear away rock surfaces.
3. **Attrition:** This is the process whereby materials carried by wind collide with one another thereby wearing away each other.

DIFFERENCES BETWEEN DEFLATION AND ABRASION

- (i) Deflation involves blowing while abrasion involves hauling rock against rock surface by wind.
- (ii) Deflation involves rolling of loose materials along the ground whereas in abrasion, rock surface are polished, scratched and worn away.
- (iii) Deflation usually results in lowering of land surface while abrasion is most effective at the base of rocks.
- (iv) Deflation is associated with wind while abrasion can be caused by wind, water and wave.

FEATURES OF WIND EROSION IN THE DESERT

1. Rock Pedestals

Characteristics: Rock pedestals are irregular in shape e.g. mushroom shape with alternate horizontal layers of hard and soft rocks. They are like pillars in structure. They are desert land forms which range from 10 – 15 meters in height.

Mode of formation: Rock pedestals are formed by wind abrasion on alternate horizontal layers of hard and soft rocks. Abrasion is greater at ground level, resulting in serious under cutting, to produce irregular shaped feature called **rock pedestals** in deserts.

2. Zeugen

Characteristics: These are tabular masses with a layer of soft rocks lying beneath a surface layer of hard rock. It has a long ridge and furrow landscape. They are also formed by wind abrasion in deserts.

Mode of formation: Zeugen is formed when a tabular mass of rock which has a layer of soft rocks lying under a layer of a more resistance hard rock is lying horizontally to the direction of wind. The mass of rock is then attacked by wind abrasion and then wears the mass into a ridge and furrow landscape, leading to the formation of Zeugen. Mechanical weathering starts the formation by opening up joints of the surface of hard rocks.

3. Yardang

Characteristics: Yardages have vertical bands of hard and soft rocks, ridge and furrow of landscape of about 10 – 15 meters long.

Mode of formation: Yardangs are formed when hard and soft rocks in vertical bands are aligned in the direction of prevailing wind. Wind abrasion wears off the softer rocks into long narrow corridors which separate the steep-sided ridges of the hard rocks. These hard rocks are called Yardangs.

4. Mesas and Buttes

Characteristics: Mesa is a flat, table-like landmass. It has a resistant horizontal top layer with steep sides and is made up of soft and hard layers.

Mode of formation: As a result of the action of denudation, the hard top layer of rock resists agents of denudation and protects the softer layers of rocks below from being eroded. At times, mesas may be formed in canyon regions. Canyon develops in the space between mesas and butte. Denudation, sometimes, may reduce mesas in areas to become isolated flat topped hills called **buttes**.

5. Inselberg

Characteristics: Inselberg is an arid land form. It is an isolated rocky out crop having steep sides, round top and composed of granite. It may rise up to a height of over 500metres and may occur singly or in group. Examples are found in Northern Nigeria, Kalahari desert, and Western Australia.

Mode of formation: Inselberg is formed from the existence of extensive old plateau. It is caused as a result of weathering and removal of weathered materials by water and wind. It is an exposure of rock out-crop.

6. Ventifacts and Dreikanter: These are pebbles sharpened or faceted by sand blasting. Wind abrasion shapes and polishes the pebbles and new facets develop when wind direction changes. Ventifacts with three wind faceted surfaces are called **dreikanter**.

7. Deflation Hollows or Depression:

Characteristics: They are formed by wind deflation. It is a desert landform with varying depths. There may be presence of sand dunes on the leeward side. It has a basin and a saucer shape. It is very extensive and can form oasis in deserts.

Mode of formation: As a result of wind deflation, large depression or hollows are produced by the scooping away of loose sand materials by wind, Sometimes below the water table. When this happens, water seeps out and oasis or swamps are formed.

FEATURES OF WIND DEPOSITION IN DESERTS

(1) Dunes: Dunes are hills or ridges of sand formed by the piling up of sand into hill shape by the action of wind. They are initiated when an obstacle of some kind prevents free movement of the wind. Thus, creating certain shape against the obstacle until it covers the latter and falls over to the other side. There are two main types of dunes, These are:

(a) Barchan

Characteristics: A barchan is a crescentic or moon shaped structure. They may occur in groups or singly. A barchan has a convex shape on windward side and a concave shape on the leeward side with horns of 15-30 metre long. It is formed by wind deposition in deserts.

Mode of Formation: A barchan is formed when an obstacle like rock impedes or prevents the movement of wind, resulting in the accumulation of sand materials. Later the sand begins to accumulate on the other side of the obstacle, leading to a crescent or moon shaped structure with horns called Barchan. The windward side of a barchan is convex and gentle, while the leeward side, being sheltered is concave and steep.

(b) Seifs or Longitudinal Dunes

Characteristics: Seifs are sword-shape. They have long and narrow ridges of sand usually of hundreds of kilometers. They are formed by wind deposition in the desert e.g. Sahara desert.

Mode of formation: Seifs are formed during wind deposition. They lie parallel to the prevailing wind which clear the corridors between dunes of sand. Eddies blow towards the side of the corridor and build up seif dunes.

(2) Loess: These are fine soil particles carried by wind. They are deposited outside the desert as loess. Loess is a fine loam, very fertile and porous.

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READING ASSIGNMENT

Essential Geography, O.A. Iwena, *Pages 58-62.*

**WEEK FOUR
ACTION OF GLACIER**

The action of glacier is an important agent of erosion, transportation and deposition in temperate regions or mountainous regions.

TERMS ASSOCIATED WITH GLACIER

1. Ice: This is solid form of water which results from freezing when the temperature is below 0°C.
2. Snow: This refers to frozen water vapour that falls in form of crystals from the atmosphere.
3. Snow-Line: It is the lower limit of snow cover on a mountain.
4. Glacier: This means moving ice i.e large accumulation of ice in motion.
5. Glaciation: It is the wearing away of the earth surface by glacier.
6. Snow Field: This is the region or area that is permanently covered by snow

ACTION OF GLACIER EROSION

1. Sapping: This is the braking up of rock by alternate freezing and thawing of water at the bottom of cracks.
2. Plucking: It is the tearing away of rocks which have become frozen on the side or bottom of a glacier.
3. Abrasion: This is the wearing away of rocks beneath a glacier by the scouring action of the rocks embedded in the glacier.

FEATURES OF GLACIER DEPOSITION IN LOWLAND AREAS

1. Boulder Clay: This consist of stones of various sizes in a mass of sand and clay.
2. Erratics: These are transported rock fragments which are composed of materials entirely different from the bedrock of the region where they are deposited. They are deposited when the ice carrying them melt into water.
3. Drumlins: It is composed mainly of boulder clay.
4. Eskers: These are long narrow ridges of sand and gravel deposited by melting water. They are usually porous.
5. Terminal Moraines: They are made up of boulders which are deposited at the edge of the ice-sheet.

6. Outwash Plain: This is a large area consisting of sand and gravel that are washed down the mountainous zone and deposited to form outwash plain which lies beyond the terminal moraines.

READING ASSIGNMENT

Essential Geography, O.A. Iwena, Pages 63-65.

WEEK FIVE ACTION OF WAVE

The action of wave as an important agent of erosion, transportation and deposition of material is confined to the coast of seas and oceans. The rate of marine erosion depends on the nature of the rocks, the amount of rock exposed to the sea, the effects of tides and currents and human interference in coast protection.

TERMS ASSOCIATED WITH WAVE

- (i) **Wave:** Wave means turbulent movement of water as a result of wind moving over the water.
- (ii) **Tide:** Tide is the alternate rise and fall of the surface of the sea approximately two times a day.
- (iii) **Current:** Ocean current is the movement of water in the ocean in a particular direction.
- (iv) **Coast:** This refers to the meeting point between the land and the sea.
- (v) **Shore:** This is the part of the land that lies between high water and low water.
- (vi) **Beach:** This refers to the material deposited on the shore by the action of wave.
- (vii) **Swash:** This refers to water thrown up the beach by breaking waves.
- (viii) **Back wash:** This is the water that sucks back and retreats after wash.
- (ix) **Undertow:** This is water which flows near the bottom away from the shore.

PROCESSES OF WAVE EROSION

- (1) **Corrosion:** This is the wearing down of the base of the cliff by wave action.
- (2) **Attrition:** This is breaking down of materials like pebbles, boulders, etc. against cliff faces and against each other, as the wave continues its activities.
- (3) **Hydraulic action:** In this process, fast moving waves force itself into cracks within the base of the cliff under pressure and enlarge the cracks.
- (4) **Solvent action:** This involves the disintegration of rock materials such as limestone in the coast by chemical action of the sea.

EVALUATION QUESTION

- 1. Differentiate between swash and backwash.
- 2. Describe how a beach is formed.

FEATURES PRODUCED BY WAVE EROSION

- (1) **Capes and Bays:** They are features of marine erosion in coastline which can be made of hard rock (cape) or soft rock (bays). A bay usually contains water and could be used as harbour.
- (2) **Cliff:** These are steep rock faces adjoining the coast. They are formed due to the action of waves on the base of headland which cut backward as the wave action intensifies.
- (3) **Coastal Cave:** A cave is a feature of marine erosion. It is an arch-shaped feature found in steep coast or cliff coast. It may contain blow-holes or geo.
- (4) **Arch:** When two caves approach each other from either side of a headland, they meet to form an arch.
- (5) **Stack:** Continuous action of waves makes an arch to collapse. The seaward portion of the highland that remains is called a stack.

- (6) **Stump:** When the stack is seriously eroded to a point that a small portion is just visible above the sea level, a stump is said to be formed.
- (7) **Geo:** Geo develops when a wave cuts into a cliff, resulting into a narrow hole called a geo. It is formed when a cave collapses.
- (8) **Gloup or Blowhole:** Owing to hydraulic action of wave, a hole might develop at the roof of a cave. Continued erosion will result in the hole piercing through to the surface of the cave and water at times may force itself through these holes to form a gloup or blow-holes.

Features of Coastal Deposition

- (1) **Beaches:** Beaches are made up of sand and gravel. They are depositional features on the coast. Beaches are formed when sand and gravel loosened from the land are moved by waves and deposited along the shore. These deposits of sand and gravel on the shore are called beaches.
- (2) **Spits:** These are ridges of sand and gravel formed by long shore drift across the entrance to coastal inlet by lying on one side to the land and the other side into the ocean.
- (3) **Bar:** Bar is a ridge, usually of sand or rock debris formed by deposition across the mouth of a river or across the entrance of a bay.
- (4) **Marine dunes and dune belt:** Dunes are on shore wind with large force which makes a large amount of coastal sand to move to form marine dunes. Marine dunes will later stretch into dune belts.

WEEK SIX CLIMATE

Climate is the average weather condition of the atmosphere over a long period of time usually about 30-35 years.

FACTORS THAT CAN AFFECT OR DETERMINE CLIMATE

- | | |
|--------------------------|-------------------|
| 1. Latitude | 6. Cloud cover |
| 2. Altitude | 7. Vegetation |
| 3. Distance from the sea | 8. Planetary wind |
| 4. Ocean currents | |

Elements of climate

1. Temperature
2. Rainfall
3. Wind
4. Relative humidity
5. Pressure
6. Cloud cover
7. Sunshine

TYPES OF CLIMATE

1. HOT CLIMATE

(a) Equatorial Climate

Location: This is located within 5° North and South of the equator.

Areas: Amazon Basin of South America, Zaire Basin of Central Africa, The Coast of West Africa.

(b) Tropical Continental (Sudan) Climate

Location: It is located between 5° - 20° North and South of the equator

Areas: Central America, North Western part of South America, Interior upland of Brazil and Bolivia, West Africa, part of East Africa, parts of India and South East Asia, Northern Australia.

2.COLD CLIMATE

(a)Polar Climate

Location: It is found around 90° North and South of the Equator, especially around the poles.

Areas: Greenland, Iceland and Antarctica.

(b)Tundra Climate

Location: It is located around 60° - 90° North and South of the equator especially around the Arctic and Antarctic circles.

Areas: Coastal strip of Greenland, Northern Canada and Alaska, parts of Eurasia and Antarctica.

3.DESERT CLIMATE

(a)Hot Desert Climate

Location: Within latitude 15° and 30° North and South of the equator.

Areas: Sahara desert, Arabian desert, Iranian desert, Thar desert, Namib desert, Kalahari desert, Great Australian desert and Atacama desert.

(b)Cold Desert Climate

Location: Within 45° - 60° North and South of the equator.

Areas: Eurasia, North America and South America.

Other types of climate are:

WARM TEMPERATE CLIMATE WESTERN MARGIN (MEDITERRANEAN TYPE)

Location: 30° - 45° North and south of the equator.

Areas: North Africa, South West of South Africa, Central Chile, California, Southern Australia, France, Spain and Italy.

WARM TEMPERATE CLIMATE EASTERN MARGIN (CHINA TYPE)

Location: 20° - 40° North and south of the equator.

Areas: China, U.S.A, Mexico, Natal in South Africa and Australia.

COOL TEMPERATE CLIMATE WESTERN MARGIN (BRITISH TYPE)

Location: 45⁰-60⁰ North and south of the equator.

Areas: Britain, France, Belgium, Netherland, Denmark, Norway and British Columbia.

COOL TEMPERATE CLIMATE EASTERN MARGIN (LAURENTIAN TYPE)

Location: 40⁰ and 50⁰ North of the equator.

Areas: North Eastern part of North America, North East Canada and Northern Asia.

WEEK SEVEN CLASSIFICATION OF CLIMATE

Climate varies from place to place and the following are the common classification of climate:

1. Greek system of classification and
2. Koppen system of classification

GREEK SYSTEM OF CLASSIFICATION OF CLIMATE

This is one of the earliest climatic classification which was made by the Greeks. The basis for the Greek classification is temperature. This system of classification divides the world into three climatic zones. These zones are:

1. Torrid zone: This zone is found within the tropics. It is very hot and has high temperature throughout the year.
2. Temperate zone: It is found between the torrid and frigid zone and has moderate temperature.
3. Frigid zone: It is found around the polar regions and It is very cold with low temperature all year round. It has lot of ice-caps in most part of the year.

KOPPEN SYSTEM CLASSIFICATION OF CLIMATE

The basis for Koppen's classification of climate are temperature and rainfall. He identified five major climatic groups which correspond with the five principal vegetation groups. These climatic groups are represented with capital letters as follows:

A-Tropical Rainy Climate

"ENVIRONMENTAL INTERVENTION"

Environment is defined as the total surrounding or medium of any organism in a given area. This include the physical surroundings, climatic factors and other living organisms in that surrounding.

SPHERES OF THE ENVIRONMENT

The earth as an environment is grouped into four spheres:

- i. Lithosphere: The solid portion of the environment which contains rocks, sand, soil, minerals etc.
 - ii. Hydrosphere: This is the liquid portion of the environment like rivers, lakes and oceans.
 - iii. Atmosphere: This is the gaseous portion of the environment where gases like oxygen, nitrogen, carbon-dioxide, ozone are found.
 - iv. Biosphere: This is the portion of the environment where plants and animals are found.
- These four spheres of the environment are interrelated and interdependent on each other.

Ecosystem: An ecosystem is defined as the community of plants and animals living together in harmony and interacting with their physical environment.

In other word; ecosystem can be defined as the relationship that exists between living thing and their non-living environment.

Components of Ecosystem

The ecosystem is made up of two main components. These are:

- (a) Abiotic (non-living) component: These are the components like soil, water, gases, sunlight etc in the environment.
- (b) Biotic component: This is the living component of the ecosystem. It includes plants and animals.

Biotic component can be grouped into three (3)

- (1) Autotrophs: This are also called the producers. They include the green plants which manufacture their own food through a process known as photosynthesis.
 - (2) Heterotrophs: These are called primary and secondary consumers. These organisms cannot manufacture their own food but depend directly or indirectly on plants for their own food e.g. man, parasites, saprophytes.
 - (3) Decomposers: These are micro – organisms that decompose dead organic matter in order to release nutrients required by producers to prepare their food e.g. Fungi and bacteria
- wholistically, the components of an ecosystem can be grouped into the following:

- | | | | |
|----------------------|--------------------------|------------|-------------|
| (1) Land (soil) | (2) Water (Lake, Oceans) | (3) plants | (4) Animals |
| (5) Drainage (river) | (6) Climate (Atmosphere) | | |

INTERDEPENDENCE WITHIN THE ECOSYSTEM

Interdependence is the word used to describe the relationship between the components of the ecosystem. This is because, components in an ecosystem depend on one another and they cannot exist in isolation. A state of inter-dependence within the ecosystem is best achieved where the components are undisturbed.

Inter-dependence in an ecosystem exists in three ways:

- (1) Interdependence within Abiotic components e.g. The weathering of rock to form soil or the evaporation of water to form cloud etc.
- (2) Interdependence within Abiotic components e.g. Animals depend on plants for food or the exchange of oxygen and carbondioxide by plants and animals.
- (3) Interdependence between the biotic and abiotic components e.g. plants depend on soil for support and nutrients, Autotrophs conver sunlight, energy. Water and carbon dioxide during photosynthesis to produce food etc.

Environmental balance

Environmental balance refers to the ways of recycling matter and the flow of energy withing an ecosystem in order to ensure continuous supply or availability.

Environmental balance is achieved through the following processes:

- (i) Hydrological (water) cycle
- (ii) Carbon cycle
- (iii) Nitrogen cycle
- (iv) Mineral nutrient cycle
- (v) Food chain and food web. (for details, see pages 115 – 118 of Essential Geography)

INTERVENTIONS WITHIN THE NATURAL ENVIRONMENT

MEANING: Environmental intervention refers to the forces of nature and the activities of man that change the natural existence of the components of the eco-system.

TYPES OF ENVIRONMENTAL INTERVENTION

There are two types of interventions in our environmental. There are man-made and natural intervention.

1. Natural Intervention includes Desert Encroachment, volcanism, sea - level changes, Earthquakes, climatic changes, Drought, flooding, Hurricane etc.
2. Human Interventions deal with man's interference with the ecosystem through his activities. Human intervention include: Deforestation, pollution, land reclamation, farming activities, construction urbanization, grazing, industrialization etc.

