

LESSON NOTE FOR WEEK TWO

SUBJECT: GEOGRAPHY

CLASS: SS3

TOPIC: CLASSIFICATION OF CLIMATE

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

1. The Greek system of classification and;
2. Koppen's system of classification

GREEK SYSTEM OF CLASSIFICATION OF CLIMATE

This is one of the earliest climatic classifications which were 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 a high temperature throughout the year.
2. **Temperate Zone:** It is found between the torrid and frigid zone and has a 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 a lot of ice-caps in most of the year.

KOPPEN'S SYSTEM CLASSIFICATION OF CLIMATE

The basis for Koppen's classification of climate is 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:

This climate is characterized by heavy rainfall throughout the year with an average daily temperature of 21°C. The climate is usually moist and hot.

B. Dry Climate:

Places with this type of climate have no rainfall with a temperature never less than 6°C, hence it is always referred to as desert.

C. Warm Temperature Climate:

There are five months with temperature less than 6°C. The mean temperature of the coldest month is below 18°C but above -3°C. This climate has winter rain and summer drought or both seasons

D. Cool Temperature Snow Forest or Snowy and Cold Climate:

The average temperature of the coldest month is below -3°C and the mean average warmest month is 10°C. There are more than six months with temperature less than 6°C which implies that it has several months of frozen ground and snow cover.

E. Polar Climate or Ice Climate:

The mean temperature of the warmest month is below 10°C. Here precipitation is in form of snow and there are no warm seasons.

Koppen's Five Climatic types can further be sub-divided into different sub-groups as shown in the table below.

Group	Sub-group
A: TROPICAL RAINY CLIMATE	Af: Tropical Rain Forest Climate Am: Tropical Monsoon Climate Aw: Tropical Grassland or Savannah
B: DRY CLIMATE	Bs: Semi Arid (Steppe) Climate Bw: Arid (Desert) Climate
C: WARM TEMPERATE RAINY CLIMATE	Cf: Mild Humid Climate Cs: Cw:
D: COOL TEMPERATE SNOW FOREST CLIMATE	Df: Dw:
E: POLAR OR ICE CLIMATE	Et: Tundra Climate Ef: The Zone of Continuous Frost Climate

WORLD CLASSIFICATION OF CLIMATE

Types of Climate under world classification of climate are:

1. **Cold climate:** This is divided into the polar climate and the Arctic or Tundra climate
2. **Polar climate:** It is located around lat 90°N and S of the equator. It covers areas like Greenland and Iceland. Temperature is below 0°C. Strong winds and low rainfall (10-15cm). Sparse population
3. **Tundra climate:** It is located around the arctic and Antarctic circles (lat 60° and 90°N and South of the equator). Covers countries like Canada, Norway, Alaska and part of Eurasia. Characterized by low temperature, inequalities of the length of day and night; prolonged winter, as such, no true tree; shorter summer encourages the growth of low shrub; precipitation is during autumn and winter periods; ores, sheep, bears, foxes and wolves are in place. Cool temperate West margin 4°C – 17°C temperature range; 600 – 800 mm annual rainfall; deciduous trees; coniferous forest; foxes and squirrels are prevalent.
4. **Cool climate:** Regions with mid-latitude cyclones within lat 45° and 60°N and S of the equator. There are three types which are:
5. **Cool temperate Eastern margin:** Areas bordering the Atlantic ocean found between lat 40° – 50°N and S of the equator covers places like N – E of North America and Argentina; rainfall is 700- 1,600mm: has coniferous forest and land; cultivation of cereals crops like rice, maize, oats and barley
6. **Cool temperate continental:** located 40° and 45° N and S of the equator. Covers place like east-central Europe; South Canada and North America high temperature (16°C) and at times fall below 0°C rainfall is 508mm; temperate grassland called prairies in Canada, steppes in Eurasia, Pampas in Argentina, Veld in South Africa and Downs in Australia scarcity of trees because of the scarcity of rainfall, long drought and severe winter; nomadic farming prevalent.
7. **Warm climate:** There are two types of warm climate which are:

(i) Warm Temperate Western Margin (Mediterranean type):

It is experienced in regions of western area of continental masses lying between latitude 30° and 45° North and South of the equator. Covers South Europe (France, Italy, Portugal, Spain, North Africa (Morocco, Libya, Tunisia), South America (Central Chile), California in the USA and South West of South Africa.

Characteristics

It is characterized by a dry and hot summer with a temperature range of between 21°C – 27°C; high temperature throughout the year; rainfall is 600 – 840mm. Drought-resistant plants grow; the presence of small shrubs patches like acacia, Rosemary and Laurel which are grown; Orchard farming with a wide range of citrus fruits are grown

(ii) Warm Temperate Eastern Margin (China type or gulf climate):

It is found between lat 20° and 40°N and S of the equator in places like South East Australia, Central part of South America, Central China, south Japan, New Zealand and South East US.

Characteristics

It is characterized by a warm moist summer and cool dry winter. 4°C – 26°C of temperature; moderate rainfall between 635mm and 1,524mm, evergreen and deciduous forest because of continuous rainfall all year round; cultivation of maize, cotton, sugar, rice and sugar- are extensively carried out.

The equatorial climate within Lat 5°N and S of the equator

Places that come under the equatorial region are: Congo Basin of Central Africa, Amazon Basin of South America, South East Asia and the Central Area of West Africa; Temperature range is 20°C – 26°C(high); conventional rainfall and thunderstorms a lightning; maximum temperature are in March and September when the sun is overhead the equator; tropical rainforest and equatorial trees; the presence of rivers; the presence of economic trees such as iroko, Sapele, Ebony, African walnut etc and plantation agriculture such as rubber, cocoa, oil palms etc. The pygmies live here around Congo Basin and Red Indians of the Amazon Basin.

Desert Climate

Desert climate is of two types; they are Cold desert climate and hot desert climate:

Hot Climate: They are classified into two; which are: (i) Equatorial climate within Lat 5°N and S of the equator. Places that come under the equatorial region are: Congo Basin of Central Africa, Amazon Basin of South America, South-East Asia and the Central Area of West Africa; Temperature range is 20°C – 26°C(high); conventional rainfall and thunderstorms a lightning; maximum temperature are in March and September when the sun is overhead the equator; tropical rainforest and equatorial trees; the presence of rivers; the presence of economic trees such as iroko, Sapele, Ebony, African walnut etc and plantation agriculture such as rubber, cocoa, oil palms etc. The pygmies live here around Congo Basin and Red Indians of the Amazon Basin.

ASSIGNMENT

1. Write a careful description of the climate in your area of residence. Show how the seasons vary throughout the year.