HOLYGHOST SECONDARY SCHOOL FOR THE DEAF
HOLYGHOST FATHERS
GEOGRAPHY FOR MONE(WEEK 7)
TOPIC:4
WEATHER.
IMPORTANCE OF EACH ELEMENT OF WEATHER
1. Sunshine
This is the sun's rays that reach the surface of the earth.
Importance of Sunshine
a. The sun's energy enables plants to manufacture food through the process of photosynthesis
b) People need sunshine to dry their crops, food like cassava, millet, maize and fish They also use sunshine to warm themselves Dries clothes after washing them
2. Temperature
This is how hot or cold an object or place is. The heat in the atmosphere is supplied by the sun.
Importance of Temperature
a) Warm is essential for plant and animal survival
b) Plants need warm in order to manufacture their fool Facilitates formation of clouds
3. Humidity
Is the amount of water vapor(moisture) in the atmosphere
There are two types of humidity:
a) Absolute humidity and
b) Relative humidity
I. Absolute humidity: Is the actual amount of water vapor or moisture in a given volume of air at a particular temperature.
II. Relative humidity: Is the ratio of the actual amount of water vapor or moisture in a given volume of air (i.e. absolute humidity) to the maximum amount of water vapor that the same volume of air can hold at the same temperature
4. Cloud Cover
Clouds are masses of tiny droplets of water or ice particles or both which are suspended in the atmosphere. They are formed when water vapor or moisture in the atmosphere cools and condenses.
Importance of cloud cover
Are important because they condense to form rain and other forms of precipitation.
5. Precipitation
This refers as the fall or deposition of moisture water vapor or frozen water from the atmosphere onto the earth’s surface. All life on the earth is purely dependent on moisture provided through precipitation.
Importance of Precipitation
a) rain provides water for plants to grow (i.e. water for irrigation, growth of grass and pasture depend on rain).
b) Animals also need water to drink
c) human needs water for domestic and industrial uses.
Note: Excess rain and rainstorms result in disasters due to flooding
6. Wind
Wind is air in motion. It is made up of variety of gases, such as oxygen and carbon dioxide. Wind move horizontally from areas of high pressure to areas of low pressure.
Importance of wind
a) They cause flow of heat and moisture and their transfer from one point to another and are also responsible for the movement of clouds.
b) Wind direction and wind speed or velocity is two important aspects in geography.
Wind direction is important because it help us to understand characteristics of the particular winds in terms of temperature and moisture content.
Wind speed or velocity determines wind strength or force and therefore determines weather conditions of a place. Example, When strong winds blow over a place, little or no rainfall will be experienced.

7. Atmospheric Pressure

This is the force at a point on the earth's surface due to the weight of air above that point. The atmosphere is the air surrounding earth's surface and it has weight, which is force with which it presses down on a unit area. The weight of atmosphere on the earth's surface and at sea level at 1033.3g/cm2.

Areas of very low pressure cause feeling of weightlessness and that is the feeling one gets when he or she is on top of a very high mountain like Mt Kilimanjaro. Areas under very low pressure may experience very strong winds periodically as air flows into such areas from high pressure regions.

Instruments Used for Measuring Elements of Weather

1. TEMPERATURE

is the degree of hotness or coldness of a body, an instrument used to measure temperature is THERMOMETER and expressed in degrees of centigrade or Fahrenheit scales. There are three main types of thermometer inside the Stevenson screen, these includes minimum thermometer, the maximum thermometer, and six's thermometer.

a) Maximum Thermometer

Is the thermometer made of glass and uses mercury to measure and record the highest temperature reached in a day. The maximum temperature is read from the side of the metal index nearest to the mercury. When the temperature falls the mercury falls, leaving behind the metal index still indicating the maximum temperature reached. A magnet is used to bring back the metal index into contact with the mercury.

b) Minimum Thermometer

Is the thermometer used to measure and record the lowest temperature reached in a day.

Alcohol is used because it has lower freezing point than mercury. Any fall in temperature will cause the alcohol column to contract and the meniscus (the curved upper surface of the alcohol column) will pull the index back along the tube whenever temperature rises, the alcohol will expand and flow freely past the metal index without pushing it up. Therefore the metal index is always left as a record of the lowest temperature reached between the readings. The part of the metal index away from the bulb will indicate the lowest temperature reached.

c) Six's Thermometer

This thermometer used for measuring and recording maximum and minimum temperature reached in a day. The thermometer consists of a "U" shaped glass tube. When temperature rises, the alcohol on the left hand side expands, pushing the mercury underneath downward and up the right hand side. While the mercury on the right hand side rises, it pushes the metal index upwards, until the highest temperature is reached for the day. This temperature is read from the scale on the right hand side, when temperature falls the alcohol on the left hand side contracts. This pushes the mercury downward and up by the mercury. Reading and Recording Temperature are taken everyday in the morning at regular fixed times but not later than 9:00 a.m. In well-equipped meteorological station, temperature are measured and recorded continuously by self-recording instrument called thermograph.

What does the following mean?

(a)The mean daily temperature Is the average of the maximum and minimum temperature. The monthly range of temperature is the difference between the highest mean daily temperature and the lowest mean daily temperature in a month.

(b) The daily range of temperature Daily range of temperature is the different between the maximum and the minimum temperatures.

(c) The annual range of temperature The annual range of temperature in a year which is the difference between the highest mean monthly temperature and the lowest mean monthly temperature. The temperature are represented by using a graph. Lines are drawn to connect places with the same mean monthly temperature. These lines are known as isotherms.

EXERCISE.

1.Define the following terms.

The mean daily temperature .

The daily range of temperature .

The annual range of temperature .

2. Mention the importance of Sunshine.

3.(a) what is wind?
(b) mention the importance of wind.