



Different Factors that Affect Temperature

There are different factors that affect the temperature of a place. The following five factors are the major reasons that affect temperature of an area.

(a) Latitude: Latitude is the main factor affecting global climate. The further we go from the equator, the temperature drops and cooler it gets. This is because we know that earth is curved which means that the sun's energy is more concentrated at the equator. This means earth gets hotter at equator and places near equator.

(b) Altitude: Temperature decreases with increasing altitude at the rate of 1°C for every 165 m of increase in altitude, as the atmosphere gets heated by terrestrial radiation. For this reason, we know that the mountains are always cooler places compared to other places. The lower layers of atmosphere are denser and have water vapor and dust particles which absorb heat, which is not prevalent in the higher altitude.

(c) Distance from the sea: Places located on the coast have moderate temperature as they are affected by land and sea breezes; hence, the temperature is low. Places away from the coast have extremes of temperature. Karachi on the coast has moderate temperature and Lahore has extremes of temperature.

(d) Prevailing winds: Places which are affected by prevailing on-shore winds have moderate temperature as compared to places which are affected by off-shore (land) winds.

(e) Ocean currents: Warm currents raise the temperature of the places, and places affected by cold currents have lower temperature. Winds blowing over the warm current also bring heavy rainfall in the region. Whereas winds blowing over cold current absorb less moisture hence the rainfall is less, e.g., North eastern Canada is affected by the cold Labrador Current hence it remains frozen in winters, whereas Northwestern Europe in the same latitude is affected by the warm North Atlantic drift and has ice-free ports in winters.

Other minor factors affecting the temperature of a place are: direction of mountains, slope of the land and vegetation, soil.



Writing Activity

1. Write any three factors that affects temperature of a place?

2. How variation in altitude affects temperature of a place?

3. If we go to an area near sea, would the temperature of that area be low or high?

4. Why is it that countries located at equator have high temperatures compared to other countries?

