

# LEARNING OBJECTIVES

## *Elements of Weather*

# **Elements of Weather -**

**The temperature, humidity, rainfall, wind speed and other factors are called the elements of the weather which are described below:**

# **1. Temperature -**

**The weather is mainly affected by the sun that produces heat and raises the temperature. The sun provides light as well as heat on the earth. It is necessary for the production of energy.**

**The heat from the sun is absorbed by the earth's surface, oceans and atmosphere which plays an important role in determining the weather of any place.**

**Therefore, it is clear that change in weather is caused due to the sun because the changes occurring in the sun's heat will change the atmosphere more frequently. The time of sunrise and sunset also changes throughout the year.**

## **2. Rainfall -**

**The amount of water droplets that fall back on the earth after condensation of water vapours is called rainfall. When the temperature is too low, these droplets in the cloud get freezed into crystals of ice and comes on the earth as snowfall.**

**During winters, the temperature falls after sunset causing condensation of water vapours near the ground. These droplets hang in the air to form fog.**

**Note: Rainfall is generally measured in millimetre. The instrument that is used to measure the rainfall is called rain guage.**

**It is a measuring cylinder with a funnel kept on its top which collects the rainwater. The rainwater collected in the measuring cylinder gives the measure of rainfall.**



### **3. Humidity -**

**It is defined as ‘the amount of water vapour in air which causes dampness of air’. Air has the ability to hold certain . amount of water vapour. The capacity of air to hold water increases with rise in temperature and falls if heavy rainfall occurs.**

**The humidity is measured by the instrument called hygrometer which consists of two thermometers.**

**The bulb of one thermometer is wet and the other is dry.**

## **4. Wind Speed -**

**It is caused due to the difference in air pressure. During summer, the wind blows from Indian ocean and Bay of Bengal and causes rain in India while during winter, it blows from the mountain of north India towards northern plain and causes cold weather (winter season).**

# **PLENARY -**

**Q. There are several elements of weather. The weather report carries the information about which of the elements of weather?**

**A. Daily weather reports carry information about the temperature, humidity and rainfall during the past 24 hrs.**

# **ASSESSMENT / EVALUATION -**

**Q. Who are meteorologists?**

**A. The scientist who prepares the weather reports are called meteorologist and the science is called meteorology.**

**Q. Why is it difficult to predict the weather of a place while it is easy to predict its climate?**

**A. Weather is a complex phenomenon which can vary over a short period of time and thus it is difficult to predict the weather of a place while it is easier to predict climate as it is the average weather pattern taken for a long time.**