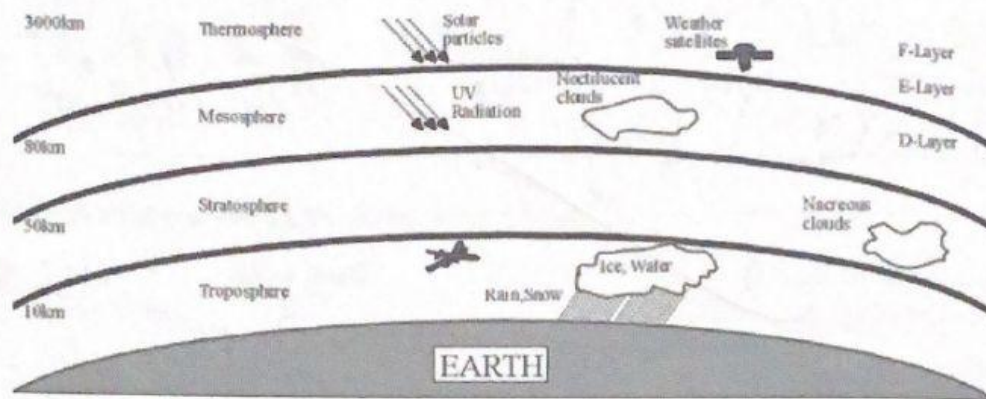


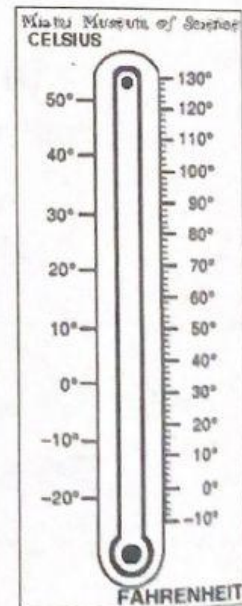
Lesson 17

The Atmosphere Layers



The layer of air that surrounds our planet is called **atmosphere**. The job of the atmosphere is to protect the earth from anything that may fall from the sky. The atmosphere has six layers.

1. **Troposphere** – layer closest to the earth. This is the air we play, work and live in. This is the air we breathe, and all weather happens here.
2. **Stratosphere** – the second layer. It contains OZONE, special oxygen that protects the earth from ultraviolet rays from the sun.
3. **Mesosphere** – the third layer and is the coldest layer.
4. **Thermosphere** – the fourth layer and is the hottest layer.
5. **Ionosphere** begins in the mesosphere and extends upward through the thermosphere. It contains electrically charged particles called Ions. This layer plays an important role in making radio and television communications possible.
6. **Exosphere** – the sixth layer. It is also known as outer space. Here the planets, moons, stars and other celestial objects are found.

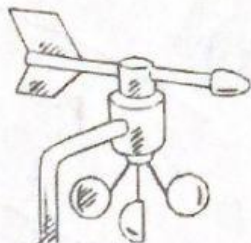


Weather is the condition of the atmosphere at a specific time and place. Conditions that affect weather are **temperature**, **air pressure**, **wind**, **humidity**, and **precipitation**.

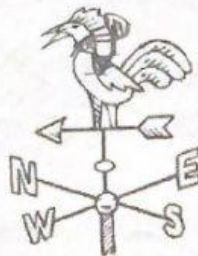
Weather conditions affect people in many ways.

- Food they eat
- Clothing they wear
- Housing
- Transportation
- Length of day/night
- Storms and other natural disasters

Rainfall and precipitation are measured with a **Rain Gauge**. Wind speed is measured with an **anemometer**. The amount of heat in a substance is called **Temperature**. We can measure the amount of heat in a substance by using a **thermometer**. A thermometer measures heat on a scale called a **Degree**. Two different scales are used in thermometers. One scale is called the **Celsius** scale, and the other is called **Fahrenheit**. On the Celsius scale, water freezes at 0° and boils at 100° . On the Fahrenheit scale, water freezes at 32° and boils at 212° . Measurements made on the Celsius scale are shown as $^{\circ}\text{C}$ and on the Fahrenheit scale as $^{\circ}\text{F}$.



anemometer



wind vane



barometer

Answer all questions in COMPLETE sentences. Marks will be deducted for incomplete sentences.

1. What is the job of the atmosphere? (1)

2. Name the layer closest to Earth. (1)

3. Name the sixth layer where planets, moons, and stars are found. (1)

4. Name the layer that has electrically charged particles called ions. (1)

5. Name the hottest and fourth layer. (1)

6. Name the layer that the ozone can be found in. (1)

7. Name the coldest layer. (1)

8. List FIVE conditions that affects the weather. (5)

9. List THREE ways weather conditions affect people's lives. (3)

10. At what degrees does water freeze on both scales? (2)
_____ °F _____ °C

11. List TWO scales found on a thermometer. (2)

12. At what degree does water boil? (2)
_____ °F _____ °C