# The Atmosphere

The layer of air that surrounds our planet is called an **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 Troposphere 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. Stratosphere It contains OZONE, a special oxygen that protects earth from Ultraviolet rays from the sun.

3. **Mesosphere**– the third layer and Mesosphere is the coldest layer.

4. **Thermosphere** – the fourth layer Thermosphere 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 Exosphere also known as outer space. Here the planets, moons, stars and other cestial 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 is measured with a **Rain Gauge**. Wind speed is measured with a **windsock**. 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 on thermometers. One scale is called the Celsius scale and the other is called **Fahrenheit**. On the Celsius scale, water freezes at 0O and boils at 100O. On the Fahrenheit scale water freezes at 32O and boils at 212 O. Measurements made on the Celsius scale are shown as OC and on the Fahrenheit scale as OF.

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