

## 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 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 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 0°C and boils at 100°C. On the Fahrenheit scale water freezes at 32°F and boils at 212°F. Measurements made on the Celsius scale are shown as °C and on the Fahrenheit scale as °F.