# **17.1 Atmosphere Characteristics**

## **Composition of the Atmosphere**

* Major Components:
  + **Nitrogen** and **Oxygen** make up 99% of gas in the atmosphere

**1%**

**21%**

* Variable Components Include:

**78%**

**Water Vapor**

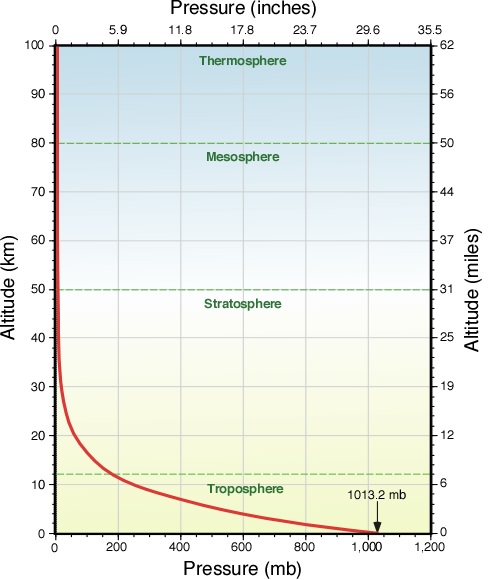
**Dust**

**Ozone**

Ozone **is a gas form of oxygen with three atoms. ()**

It is created by  **is split into a single *O*xygen atom by Ultraviolet Radiation and recombined with another molecule to form**

The Ozone Layer is only 3mm thick! It protects life on Earth by **absorbing Ultraviolet Radiation**.

1. **Height and Structure of the Atmosphere**
   * Pressure Change

Pressure **decreases** with an increase in altitude

* Troposphere
  + **Sea level up to approx. 12 km**
  + **All weather occurs here.**
  + **Temp. drops because decrease in pressure**
* Stratosphere
  + **12km up to 50 km**
  + **Temperature starts to warm up because of ozone layer**
* Mesosphere
  + **50 km to 80 km**
  + **Temp. because air pressure drops**
* Thermosphere
  + **80 km to 700 km (beyond this point is called Exosphere)**
  + **Temp. because and absorb short-wave high-energy solar radiation.**