

Topics	Notes, Diagrams, Drawings
Composition of the Atmosphere	<p>The atmosphere is a mixture of gases that surrounds the earth.</p> <p>Nitrogen composes 78%, Oxygen 21%, and 1% is Carbon Dioxide, Argon, Water Vapor, and other gases.</p> <p>The atmosphere contains liquids (Clouds) and solids (Smoke, ash, dust).</p>
Air Pressure	<p>The measure of the force which the air molecules push down on a surface.</p>
Examples	<p>Human pyramid: more people on the bottom, fewer on top. People on the bottom have more weight on them than the people on top.</p> <p>You have 14.7 lbs of air pressing on every square inch of your body.</p>
Air pressure and Altitude	<p>As altitude increase, air pressure decreases. There are fewer gas molecules pushing down at higher altitudes.</p> <p>Altitude is the height above the Earth's surface.</p>
Air Temperature and Altitude	<p>As altitude increase temperature varies. Some layers have gases which absorb more thermal energy than others, such as the ozone layer.</p>

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Layers of the Atmosphere	The atmosphere is composed of 4 distinct layers.
Troposphere	The layer that lies next to the Earth's surface. It is the densest layer. 90% of the gases are in the troposphere. Almost all the Earth's CO <sub>2</sub> , O <sub>2</sub> , Clouds, Water Vapor, Air pollution, and life are found here. About 10 miles thick.
Stratosphere	The 2nd layer above the troposphere. Between 10 and 30 miles above the surface. The air is thin, contains little moisture, and is extremely cold in the bottom half.
Ozone Layer	The upper half contains a thin layer of Ozone. Ozone is made up of 3 oxygen molecules. It absorbs solar energy in the form of UV radiation. This makes the ozone layer warmer and also protects us from harmful radiation.
Mesosphere	The 3rd layer, between 30 and 50 miles above the Earth's surface. The coldest layer and windiest layer. Wind speeds can reach 200 mph.
Thermosphere	The uppermost layer, sometimes referred to as the exosphere. Forms the boundary between space. High temperature, but very low heat energy.
Ionosphere	The upper part of the mesosphere and lower thermosphere contains a layer of nitrogen and oxygen atoms that absorb harmful radiation (X-Rays, Gamma Rays). Creates charged particles called ions which reflect radio waves and can glow in a phenomenon know as the Northern and Southern Lights.