



Brief note on atmosphere

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DESCRIPTION

The atmosphere is the thin envelope of gas molecules surrounding the Earth it's held down by Earth's gravitational pull. The atmosphere is concentrated at the Earth's surface and as you move upward into the space at about 100 km above sea level. The atmosphere is actually veritably thin compared to the size of the earth. Its consistence can be compared to a piece of paper laid over a beach ball or the skin of an apple. The heat trapping capability it helps to keep the Earth warm enough for life and it also protects the Earth from dangerous solar radiation and cosmic rays. While there are no exact boundaries within the atmosphere, it's divided into layers predicated on temperature and pressure. The actual lower layer, which contains 90 of the atmosphere's mass, is called the troposphere. This is also where all living things are found and where all rainfall occurs. Aeroplanes fly at the very top of the troposphere, so they can fly over the weather, which causes turbulence. The jet stream, a fast moving area of wind in the upper troposphere has been clocked at over 300 miles per hour. While temperatures at the bottom of the troposphere are nice and with good condition for the cause of life, temperatures at the top about -60 °F. The troposphere is also the thinnest layer, only about 10 miles high. The other layer up from the ground is the stratosphere. This layer extends from about 10-30 miles and unlike the troposphere, it increases in temperature according to the height from the ground. It starts from about -60 °F at the bottom to about 32 °F, at the top. This is because ozone molecules form here will absorb the warm ultraviolet radiation from the sun.

The third and mid layer is the mesosphere. This layer extends from 30-50 miles in altitude, and unlike the stratosphere below, it absorbs very little solar radiation. This level is incredibly cold, starting from freezing at the bottom to about -130 °F at the top. The following layer above the thermosphere, is the largest layer, extending from 50-300 miles. Satellites revolve around the Earth here and this layer actually increases in temperature with increase in altitude. The ionosphere is a sub layer found at the top of the mesosphere and at the bottom of the thermosphere and gets it because it's ion rich. This region is a special place in the sky because this is where sun light rays in the sky called sunrise occur.

CONCLUSION

The last layer is the called the exosphere because it's on the outside like an exoskeleton. This layer begins at about 300 miles from the ground but, as mentioned before, slowly fades into space, so it's hard to tell exactly where it ends. Scientists believe that Earth was formed about 5 billion years ago. In the first, 500 million years a thick atmosphere surfaced from the vapor and feasts expelled during stormy degassing of the earth's innards. The most important point of the ancient atmosphere was the lack of free oxygen. Evidence of an oxygen-free atmosphere is hidden in early rock formations that contain numerous elements, similar as iron and uranium. As the Earth continued to cool, the water vapor found in the atmosphere condensed to form the oceans and fresh water bodies on the land. Early aquatic organisms called blue-green algae began using energy from the sun to split molecules of H₂O (water) and CO₂ and recombine them into organic combinations and molecular oxygen (O₂).