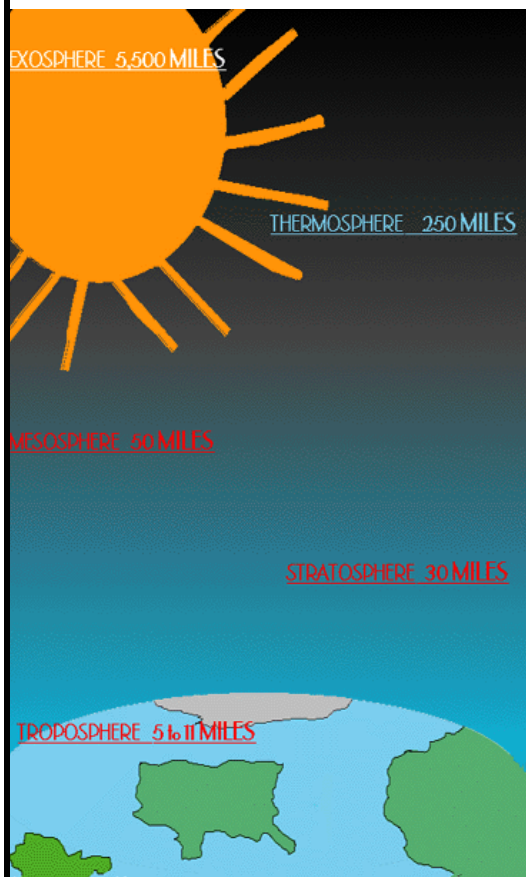


Acid rain is more acidic than normal rain and forms through a complex process of chemical reactions involving air pollution. The two most important pollutants that contribute to the formation of acid rain are oxides of nitrogen and sulfur dioxide, which react with moisture in the atmosphere to form nitric and sulfuric acid. The sulfur and nitrogen compound that contribute to acid rain primarily come from manmade sources, such as industries and utilities. Emissions also come from automobiles and other forms of transportation and industrial processes, such as smelting. Acid rain can harm forests and crops, damage bodies of water, and contribute to the damage of statues and buildings. Researchers are considering the possible effects of acid rain on human health. These acidic pollutants can be deposited through rain, snow, fog, dew, or sleet. Large quantities can also be deposited in a dry form through dust. Pollutants that contribute to acid rain may be carried hundreds of miles before being deposited on the earth. Because of this, it is sometimes difficult to determine the specific sources of these acid rain pollutants.



Greenhouse Gases: Ozone



Ozone can be found in two places in the atmosphere. In the stratosphere, radiation from the sun turns oxygen into ozone. This forms the ozone layer, which protects living things from harmful radiation from the sun. A tiny bit of ozone from the ozone layer mixes into the lower atmosphere, in the troposphere. So, the troposphere contains a tiny amount of ozone naturally. However, human activities have caused more ozone to form in the troposphere. Ozone in the troposphere acts as a greenhouse gas, trapping radiation and leading to warming.

When gasoline is burned in cars and other automobiles, carbon and nitrogen compounds come out of the tailpipe and into the atmosphere. Sunlight breaks apart these carbon and nitrogen compounds to make ozone. The same thing happens to make smoke from factories and power plants that burn fossil fuels. Ozone is one of the main compounds in smog.

The amount of ozone in the troposphere has increased by about 30% since humans have been building factories and automobiles. This increase is so much that scientists think ozone could play an important role in global warming. However, ozone has a short residence time in the atmosphere. Therefore, if people release less ozone into the lower atmosphere, then the amount of ozone in the lower atmosphere should decrease quickly.

