

It is a way of thinking and utilizing the existing knowledge and principles of chemistry and other science to reduce the adverse impact in environment.

Green chemistry

Amount of oxygen required by bacteria to break down the organic matter present in a certain volume of a sample of water.

Biochemical oxygen demand (BOD)

Pathogens

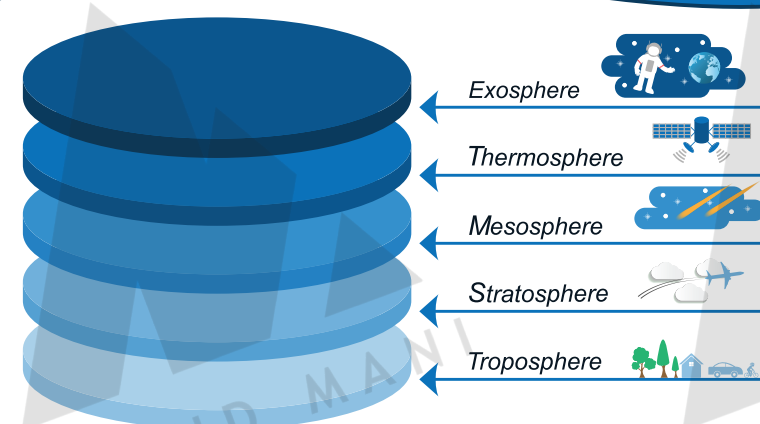
Organic waste chemical pollutants plastic waste.

Water Pollution

Troposphere : 0-10 km
Stratosphere : 10-30 km
Mesosphere : 30-50 km
Thermosphere : 50-400 km
Exosphere : 400 km

Layer of Atmosphere

Atmosphere of Earth



When pH of rain water drops below 5.6

Acid Rain

Environmental Chemistry

Atmosphere

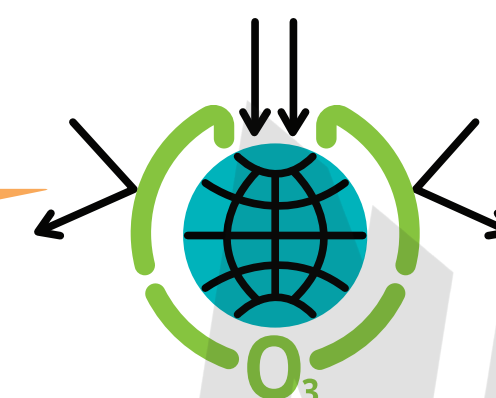
Atmospheric Pollution

Oxides of Sulphur
Oxides of Nitrogen
Oxides of Carbon \rightarrow CO, CO_2
Particulate Pollutants
Hydrocarbons

Smog \rightarrow Smoke + Fog

• Classical Smog
• Photochemical Smog

Depletion of O_3 Layer



Chlorofluorocarbon (CFC's)
 $\text{CFC} + h\nu$ (high heat) + O_3
 \downarrow
Free Cl ion
 $\text{Free Cl ion} + \text{O}_3 \rightarrow \text{O}_2 + \text{O}$

Gradual increase in average temperature of surface of the earth due to increase in concentration of green house gases (CO_2 , CFCs, CH_4)

Global warming

Green House Effect

It is naturally occurring phenomenon responsible for heating earth's surface and atmosphere

Soil Pollution

• Pesticides
• Herbicides
• Industrial waste
• Plastics

Preventions

• Use of manures.
• Use of bio-fertilizers.
• Proper Sewage system.
• Salvage and recycling.

Types

1. Biodegradable waste:
Generated by cotton mills, paper mills, textiles, etc.
2. Non-biodegradable waste:
Generated by power plants, steel plants, fertilizer industries, etc.