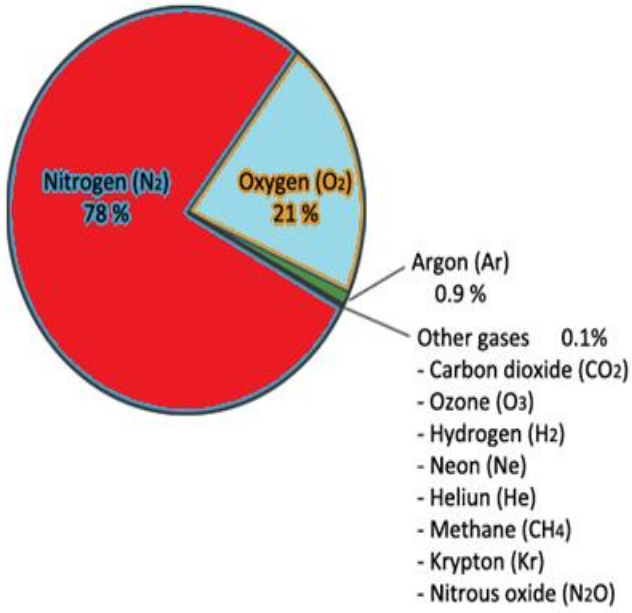
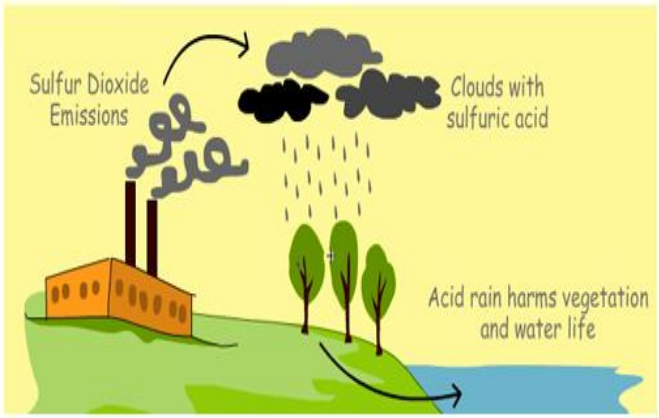
Oxygen, Air & Burning

CONSTITUENTS OF AIR



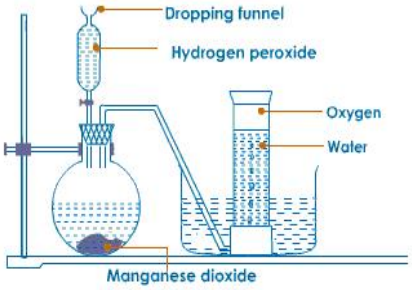
Nitrogen: dilutes effect of oxygen and controls rate of combustion
Needed for proteins and important compounds like fertilizers, ammonia and nitric acid
Used to keep food fresh because it does not allow growth of oxygen by preventing oxidation
Oxygen: needed to sustain life, and for combustion
Carbon dioxide: needed for photosynthesis, retains heat in atmosphere and balances temperature on earth. Used in fire extinguishers
Inert gases: Helium is used in meteorological balloons, Neon is used in light bulbs, Radon is used in treatment of cancer. Krypton and Xenon are used in photography
Dust particles and water vapours help in formation of clouds

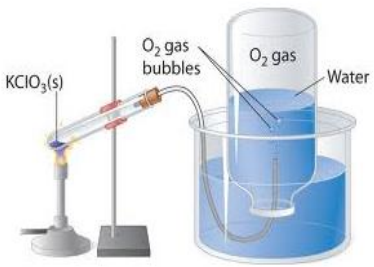
AIR POLLUTION:

Causes of air pollution		Effects	
	Automobile emissions Industrial activity Burning of fuels Smoke Pollen CFCs	Smog Asthma and bronchitis CO poisoning Lead oxide particles can cause brain damage Mercury particles can cause Minamata disease	Acid rain  Acid rain can corrode buildings, metallic structures and damage soil

OXYGEN:

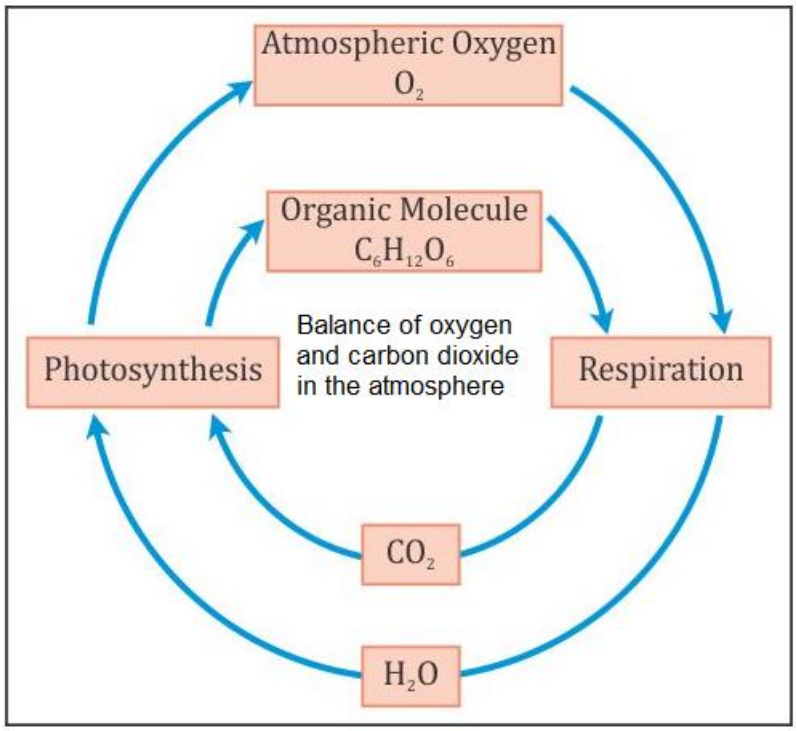
Preparation in the lab:

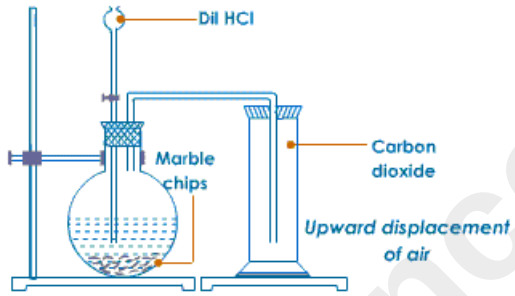




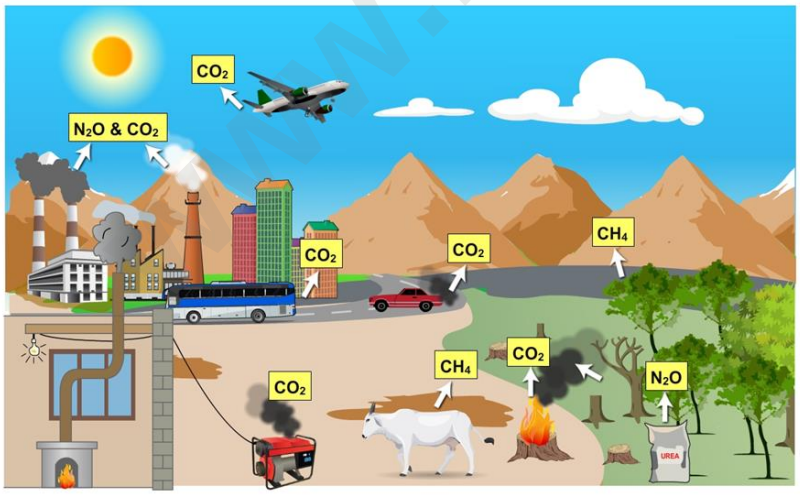
Properties:
Supports life, odorless, tasteless
Supports combustion
Causes oxidation in metals and non-metals
Causes rust formation (Iron + oxygen→ hydrated ferric oxide or rust)

Balance of carbon dioxide and oxygen



Carbon dioxide preparation in lab	Properties
	Neither burns nor supports combustion With alkalis→ carbonate salts and water With water→ weak acid called carbonic acid With litmus→ turns moist blue litmus to red **Turns milky when passed through lime water** With metals→ Metal oxide + Carbon With non-metals→ C+ CO_2→ 2CO (poisonous carbon monoxide)

Greenhouse effect and global warming



Global Warming is the increase of Earth's average surface temperature due to effect of greenhouse gases, such as carbon dioxide emissions from burning fossil fuels or from deforestation, which trap heat that would otherwise escape from Earth. This is a type of greenhouse effect