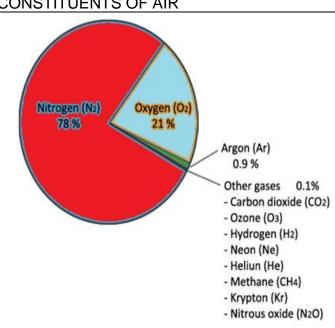
Oxygen, Air & Burning

CONSTITUENTS OF AIR



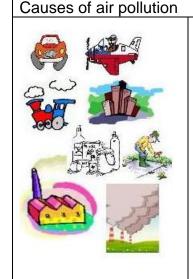
Nitrogen: dilutes effect of oxygen and controls rate of combustion

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

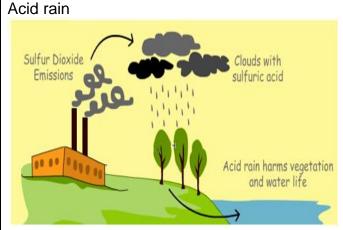
Dust particles and water vapours help in formation of clouds

AIR POLLUTION:



Automobile emissions Industrial activity Burning of fuels Smoke Pollen **CFCs**

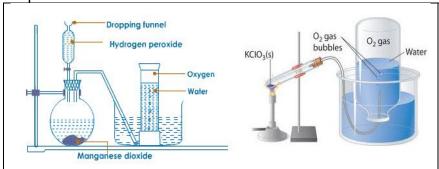
Effects Smoa Asthma and bronchitis CO poisoning Lead oxide particles can cause brain damage Mercury particles can cause Minamata disease



Acid rain can corrode buildings, metallic structures and damage soil

OXYGEN:

Preparation in the lab:



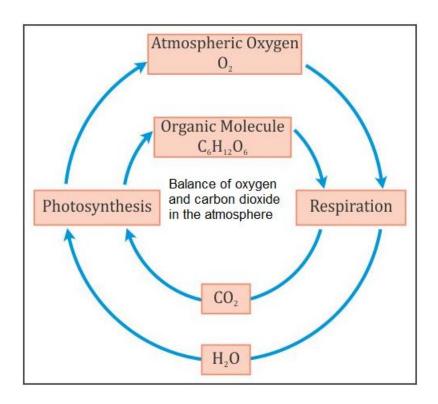
Properties:

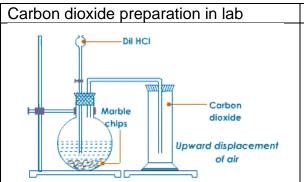
Supports life, odorless, tasteless Supports combustion

Causes oxidation in metals and nonmetals

Causes rust formation (Iron + oxygen→ hydrated ferric oxide or rust)

Balance of carbon dioxide and oxygen

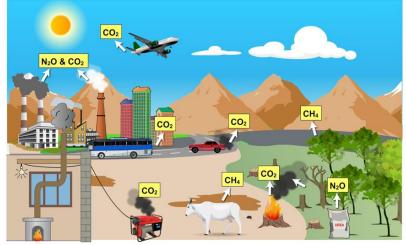




Properties

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+ CO₂→ 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