Air

- mixture of many gases and dust particles.
- present everywhere around us.
- moving air is called wind
- Air is a mattes as it has masses and occupies space.
- it is transparent and we can see through it.

Composition of Air

- Major components of air are nitrogen (78%) and oxygen (21%). The remaining 1% of air is other gases such as CO_2, argon etc, water vapour and dust particles.

(1) Nitrogen

- constitutes 78% of air
- required for the growth of plants \& animals
- required to synthesise proteins in the body.
- does not support burning.

(2) Oxygen

- constitutes 21% of air
- essential for the survival of all living organisms.
- supports burning.
- necessary for us to get energy from food.

(3) Carbon dioxide

- constitutes 0.03% of air
- released into the atmosphere by means of respiration
- plants use CO_2 to synthesise food by photosynthesis.
- released on burning plant and animal matter.
- used in fire extinguishes.

(4) Water vapours.

- Water evaporates from the surface of water bodies in the form of water vapour. its is important for the occurrence of water cycle.
- Amount of water vapour present in air at any given time \& place is humidity.

(5) Dust & Smoke

- amount of dust particles & smoke in air varies from time to time
- burning of fuels produces smoke which contains various harmful gases & dust particles.
- Smoke is given out by vehicular exhaust, factories, chimneys from homes, etc.

Atmosphere

- A layer of air that surrounds the earth and extends up to several kilometers above the earth's surface
- it is responsible for weather changes -ling place on earth
- acts as a blanket and keeps the earth at right temperature for life to exist.
- upper layer of atmosphere contains a layer called ozone that prevent harmful uv rays to reach the earth' surface.

Air in Water & soil

- air is present in dissolved form in water.
- air is present in spaces between the soil particles.

Uses of air

- required for the occurrence of two very important processes. i.e respiration \& photosynthesis.
- helps in dispersal of seeds and pollination of flowers.
- plays an important role in water cycle.
- Wind makes the windmill rotate.
- helps in the movement of sailing yachts, gliders, parachutes et.
- used to inflate the balloons, tyres of bicycles, cars, et.
- Used to play many musical instrument like flute, mouthorgan etc.

Oxygen cycle

- Plant, animals and other organisms together help to maintain the concentration of different gases in the atmosphere
- Plants produce oxygen during photosynthesis than they consume during respiration.
- They take in oxygen and release carbon dioxide during respiration.
- The balance of oxygen and CO_2 in the atmosphere is maintained mainly through the process of respiration and photosynthesis.