

## Air around us

### Synopsis

- Just like soil and water, air is also a part of the earth. Gases like hydrogen, oxygen, nitrogen, carbon dioxide and many other gases together form a mixture called air.
- Air and some other components form a very thin layer over the earth's surface. This layer is called the atmosphere.
- The different gases present in the air have unique properties and play a vital role in the creation and evolution of life.
- Air cannot be seen because it is transparent, colorless but it occupies space. When air moves, it is called wind which can be felt.
- The blanket of air surrounding the earth is the atmosphere.
- As air is a mixture, all the constituent gases have their original properties and they can be recovered separately. One such process of obtaining nitrogen from air includes liquefaction (cooling) followed by fractional distillation.
- Nitrogen makes up the major part of air. It is not required by us directly, but it is used in the form of compounds. It is essential for plant and animal growth and has various other uses.
- About one-fifth of air is made up of oxygen. It is required by all living organisms for breathing.
- Plants release oxygen into the air through a process called photosynthesis.
- The other important constituents of air are carbon dioxide, water vapour and inert gases.
- Water vapour plays an important role in the water cycle. The amount of water in the air is a measure of the humidity of that place.
- Carbon dioxide is required by plants to prepare their food by the process of (photosynthesis).
- Air is also present in soil and water.
- Air is necessary for life as we breathe it. Organisms living on land directly consume oxygen from the air.

- Oxygen in the air is continuously being used in burning and breathing (respiration), and carbon dioxide is being added to the air.
- Green plants absorb carbon dioxide from the air and make food by combining it with water and energy from sunlight with the help of chlorophyll and release oxygen into the air.
- Air plays a major role in sailing of boats/communication/wind mills, generation of electricity, water cycle, etc.
- Earthworms come out of the soil after heavy rain as they cannot breathe in waterlogged soil.
- After heavy downpour, ants also carry their eggs from their anthills to safe places.