

SCIENCE

CHAPTER-15 AIR AROUND US

Exercises

Question 1:

What is the composition of air?

Answer 1:

Air contains some water vapour, dust particles and gases. The gases in air are mainly nitrogen, oxygen, small amount of carbon dioxide, and many other gases. In fact, nitrogen and oxygen together make up 99% of the air. The remaining 1% is constituted by carbon dioxide and a few other gases, water vapour and dust particles.

Question 2:

Which gas in the atmosphere is essential for respiration?

Answer 2:

Oxygen gas in the atmosphere is essential for respiration.

Question 3:

How will you prove that air supports burning?

Answer 3:

Place a burning candle upright in a tray having water. Cover it with a glass jar. Water will make it air-tight. During burning, oxygen is consumed and carbon-dioxide is released. After sometime no oxygen is left inside the jar and flame goes out. It shows air support burning.

Question 4:

How will you show that air is dissolved in water?

Answer 4:

Take some water in a glass vessel or beaker. Heat it slowly on a tripod stand. Look carefully at the inner surface of the vessel, before reaching to its boiling point, the bubble of air start rising from bottom to surface. These bubbles come from the air dissolved in water.

Question 5:

Why does a lump of cotton wool shrink in water?

Answer 5:

Sufficient volume of air is present in the cotton wool. When dipped in water, this air is replaced by less volume of water, so it shrinks.

Question 6:

The layer of air around the earth is known as_____.

Answer 6:

The layer of air around the earth is known as **atmosphere**.

Question 7:

The component of air used by green plants to make their food, is_____.

Answer 7:

The component of air used by green plants to make their food, is **carbon dioxide**.

Question 8:

List five activities that are possible due to presence of air.

Answer 8:

- Living beings use air for respiration.
- Plants use air (carbon dioxide) to prepare their food.
- Blowing air (wind) is used for power generation by wind mills.
- Air helps in burning of fuels and substances.
- Air helps in the scattering of seeds and pollens of plants.
- Air helps in the movements of sailing yachts, gliders, parachutes and aeroplanes.

Question 9:

How do plants and animals help each other in the exchange of gases in the atmosphere?

Answer 9:

There is the interdependence of plants and animals. Plants and animals respire i.e. they intake oxygen and gives out carbon dioxide in the atmosphere. Plants take carbon dioxide from the atmosphere and prepare food and return oxygen to atmosphere by the process of photosynthesis. So, in this way plants and animals help each other in the exchange of gases in the atmosphere.