

Class 6 Science Solutions

Chapter 11: Air Around Us

Exercise Answers:

1. What is the composition of air?

Solution:

The air we breathe is composed of various elements, including water vapour, oxygen, nitrogen, carbon dioxide, dust, and smoke.

2. Which gas in the atmosphere is essential for respiration?

Solution:

The presence of oxygen in the atmosphere is pivotal for respiration.

3. How will you prove that air supports burning?

Solution:

If two candles of the same length are placed on a table, lit and one of them is covered by an inverted glass tumbler, we can observe that the candle covered with the glass eventually extinguishes while the other candle continues to burn. This occurs because the air component that supports the burning process within the glass tumbler is limited, and most of it is consumed by the burning candle. In contrast, the other candle receives a continuous supply of oxygen, which is essential for combustion.

4. How will you show that air is dissolved in water?

Solution:

To conduct this experiment, place some water in a container and heat it slowly on a tripod stand. Prior to the water reaching boiling point, carefully examine the inner surface of the container. One will notice the presence of small bubbles within the liquid.

These bubbles arise from the air that's dissolved in the water. As the water is heated, the air, in the beginning, will escape. This experiment confirms the presence of air within the water.

5. Why does a lump of cotton wool shrink in water?

Solution:

When immersed in water, a lump of cotton wool reduces in size as the air pockets within the cotton are displaced by water, which causes the fibers to clump together.

6. The layer of air around the earth is known as _____.

Solution:

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

7. The component of air used by green plants to make their food is _____.

Solution:

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

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

Solution:

The five activities that are possible due to air are as follows:

1. Photosynthesis
2. Cloud formation
3. Respiration
4. Transpiration
5. Winnowing

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

Solution:

During the respiration process, animals and plants take in oxygen from the atmosphere and subsequently release carbon dioxide gas. However, green plants contribute to the exchange of gases in the atmosphere by releasing oxygen gas while utilizing carbon dioxide during photosynthesis. Therefore, plants and animals work together to regulate the exchange of gases in the atmosphere.

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