

Exercise Questions

Page number – 153-154

1. What is the composition of air?**Solution:**

Air comprises of water vapour, Oxygen, Nitrogen, Carbon dioxide, dust and smoke.

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

Oxygen in the atmosphere is essential for respiration.

3. How will you prove that air supports burning?**Solution:**

Place two candles of the same length on a table. Light both the candles. Cover one of the candles with an inverted glass tumbler. We observe that the candle covered with a glass tumbler got extinguished after some time, whereas the other candle continued burning. The candle gets extinguished because the component inside of the glass tumbler, which supports burning, is limited. Most of the component is used up by the burning candle. However, the other candle is getting continued supply of air. This component of air, which supports burning, is known as oxygen.

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

Take some water in a container. Heat it slowly on a tripod stand. Before water begins to boil, look at the inner surface of the container. We observe tiny bubbles inside.

These bubbles come from the air dissolved in water. When you heat the water, to begin with, the air dissolved in it escapes. This experiment concludes air is present in the water.

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

The lump of cotton wool shrink in water because the air inside the cotton lumps are replaced by water which makes the layer stick 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:

Activities that are possible due to air are:

- i) Photosynthesis
- ii) Cloud formation
- iii) Respiration
- iv) Transpiration
- v) Winnowing

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

Solution:

During the process of respiration, animals and plants consume oxygen from the air and release carbon dioxide gas in the air. But green plants also release oxygen gas by utilizing carbon dioxide during the process of photosynthesis. Hence, in this way, plants and animals help each other in the exchange of gases in the atmosphere.