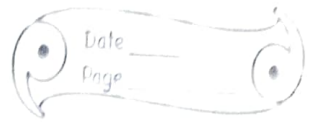


CW  
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# Air and Atmosphere

## Exercise-1

1. What is atmosphere?

Ans → The air or gas that surrounding the earth or other planets are called 'atmosphere.'

2. Why can't we see air?

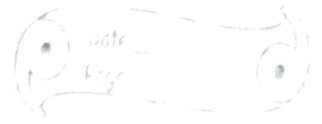
Ans → We can't see air because air is a mixture of gases and it looks invisible because it sends very little colour to our eyes.

3. What is 'wind'?

Ans → Air moves from areas of high pressure to low area of low pressure and fast moving air is called 'wind.'

4. What would have happened if there would have been no atmosphere around the earth?

Ans → Atmosphere protect us from harmful rays of the sun and if there could no atmosphere then we could be burnt or frozen because



in the absence of atmosphere, the earth would get very hot during the day and very cold at night that we would not be able to survive. There would be no life on earth under such a condition.

5. Why is air called a mixture? Give five facts in support of your answer.

Ans → Air is called a mixture because:

- (i) The composition of air varies from place to place and from time to time.
- (ii) No energy change occurs when the components of air are mixed together.
- (iii) The components of air retain their individual properties.
- (iv) Air cannot be represented by a formula as its constituents are not in a fixed proportion.
- (v) The components of air can be separated by

Simple physical method.

6. What are the main components of air? Write down the composition of three main gases present in air by volume.

Ans) The components of air are: nitrogen, oxygen and small quantities of carbon dioxide and water vapour. Dust particles and traces of inert gases like helium, neon, argon, etc. The composition of three main gases present in air by air are:

- (i) Oxygen  $\Rightarrow$  21%
- (ii) Nitrogen  $\Rightarrow$  78%
- (iii) Carbon dioxide  $\Rightarrow$  0.03-0.04%

7. What do you observe when

i) When Ice cold water is filled in a glass tumbler, the fine water droplets get deposited on the outer wall of the glass tumbler.

ii) When a burning candle is covered with a



inverted jar, the candle continues to burn for some time and then gets extinguished. The water level rises slightly upto  $\frac{1}{5}$ <sup>th</sup> part of the jar containing air. This part is oxygen which help the candle to burn. When it is used up candle stops burning. The  $\frac{4}{5}$ <sup>th</sup> part of air is still present in the jar is in active air, which is nitrogen.

iii) When carbon dioxide gas is passed through lime water, then blow air by an air pump through the long tube and the air blown through lime water turns it milky.

iv) ~~At~~ When a beam of light is allowed to enter in a closed dark room through a small dark hole, at that time moving dust particles in the beam of light. This confirms that the presence of dust particles in the air.

8. Write the chemical name of

(i) Lime water  $\rightarrow$  Calcium hydroxide

(ii) The white insoluble solid formed on reaction of carbon dioxide with lime water  $\rightarrow$  Carbon dioxide and Calcium Carbonate