

St. Andrews Scots Sr. Sec. School

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Session: 2024-2025 – Answer Key

Class: VI

Subject: Science

Chapter: Air around us

CHECK POINT 1

1. Atmosphere
2. Water vapour
3. Nitrogen ; Oxygen
4. Dust
5. Breathing ; Burning

CHECK POINT 2

1. True
2. False
3. True
4. True
5. True

Define these terms:

1. Photosynthesis :- The process in which green plants make their own food in the presences of sunlight, air and water.
2. Chimney:- A pipe through which the smoke or steam is carried up and out through the roof of a building.
3. Respiration:- A process by which organism exchange gases, especially oxygen and carbon dioxide with the environment.
4. Burning:- A process in which a substance reacts with oxygen to give heat and light.

PRACTICE TIME

A.Tick the correct answer :-

1. (b)
2. (c)

3. (b)
4. (a)
5. (d)
6. (b)
7. (b)
8. (d)
9. (d)

B. Fill in the blanks:-

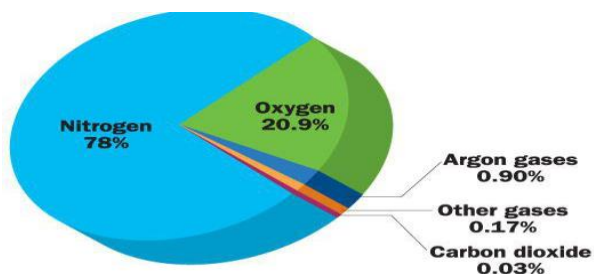
1. air
2. noble
3. gills
4. burning
5. more

C. Very Short answer type:-

1. Nitrogen
2. Oxygen
3. Photosynthesis
4. Wind
5. Carbon dioxide

D. Short answer type questions:-

1. The composition of the air is as follows:
Nitrogen – 78%, Oxygen – 21%, Carbon dioxide – 0.03%, Noble gases – 0.95% and small amounts of water vapour, smoke and dust particles.



2. The three uses of air are:
 - (a) Moving air helps to rotate the blades of windmills.
 - (b) Air helps to separate husk from grains by winnowing.
 - (c) Air helps aeroplanes, helicopters, gliders and yacht to move and birds to fly.
3. Aquatic animals use air (oxygen) dissolved in water for breathing.
4. As carbon dioxide gas is essential for the process of photosynthesis, it is important for plants.
5. The thick layer of air surrounding the earth is called atmosphere.

E. Long answer type questions:-

1. Oxygen gas is required for burning. It can be shown by following activity:

Take a bowl and fix a small candle in its centre. Pour some water into the bowl. Note the level of water. Light the candle. Invert a glass jar over it.

The candle keeps burning for some time and then gets extinguished. Also, there is a rise in the water level in the glass jar.

This shows that oxygen gas present in the air helps in burning. The space which was occupied by oxygen is now taken up by water.
2. 'Soil contains air' can be shown by following activity:

Take a beaker and put some soil in it. Add some water to the beaker.

The water poured on soil goes into the spaces between the soil particles and pushes the air out of the soil particles in the form of bubbles. This shows that air is present in soil.
3. 'Air is dissolved in water' can be shown by the following activity:

Pour some water into a beaker and heat it.

On heating the water, some bubbles are seen on the inner surface of the beaker. These bubbles come from the air dissolved in water. This activity shows that air is dissolved in water.
4. Air is present all around us. This fact can be shown by following activity: Dip a glass upside down into the water. Now, tilt the glass a little and see if the water enters the glass.

When the glass was dipped into water without tilting it, no bubbles were seen. This is because the air was occupying the space in the glass. On tilting the glass, the air escapes in the form of bubbles and water fills the empty space that was occupied by air.

This shows that the glass was not empty. It was filled with air. Hence, air is present all around us.
5. (a) Availability of oxygen decreases as we go higher and higher. Therefore, mountaineers carry oxygen cylinders with them to get sufficient supply of it.
(b) Nitrogen is a nonreactive gas and it prevents food from oxidising, i.e., from spoiling. Hence, it is used in packaging of food.
(c) Carbon dioxide does not support combustion. It is heavier than oxygen and able to disconnect the contact between oxygen and burning substance. Hence, it is used in fire extinguishers.

(d) Smoke produced in the furnaces of factories contains a large number of tiny particles and poisonous gases which are harmful to us. Therefore, factories have tall chimneys to keep the smoke away from us.

(e) Nasal cavities have hair and mucus that filter the air when we breathe. Thus, harmful particles and microorganisms are prevented from entering our body. Due to this, we should never breathe from our mouth.

(f) Earthworms and other insects use air present in soil. Earthworms move in and out of the soil making space for air to pass through the soil. The excreta of earthworms provides nutrients to the soil for plants to grow. Therefore, they are called 'friends of farmers'.

F. HOTS Questions :-

1. A diver carries with him a cylinder filled with oxygen because the diver has no such organ (like gills) which can be used to take oxygen dissolved in water.
2. Oxygen is produced by green plants as a by-product during photosynthesis. Due to this reason, we do not run out of oxygen.
3. Snakes and other animals living in the soil, come out of their burrows in rainy season because their burrows get filled with water and they do not get air to breathe.

