



DPM CLASSES & COMPUTERS

Special for Math's & Science

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SCIENCE -6 (CH-15- AIR AROUND US)

Question 1:

What is the composition of air?

Answer 1:

Air is a mixture of 79% nitrogen, 20% oxygen, 1% carbon dioxide, water vapours and some other gases. Air also contains dust particles.

Question 2:

Which gas in the atmosphere is essential for respiration?

Answer 2:

Oxygen is essential for respiration.

Question 3:

How will you prove that air supports burning?

Answer 3:

Take a candle. Place it in a tub. Light the candle and also fill the tub with some water. Cover the candle with an inverted glass. You will find that the candle blows out after burning for some time, and the water level inside the inverted glass rises up to some extent.



The component, oxygen, of air inside the glass is used up in burning. Therefore, water occupies that space. This shows that air supports burning.

Question 4:

How will you show that air is dissolved in water?

Answer 4:

To show that air is dissolved in water we take water in a pan and heat it. Just before it boils, you will notice some bubbles at the inner surface of the pan. These bubbles are formed because of air dissolved in water.



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○ Question 5:

Why does a lump of cotton wool shrink in water?

Answer 5:

A lump of cotton wool shrinks when immersed in water. This is because air present in the cotton wool escapes. Thus, the volume of the cotton wool decreases.

○ 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 the presence of air.

Answer 8:

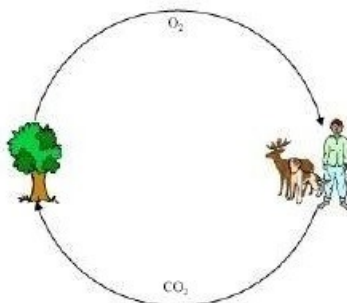
- (i) Respiration
- (ii) Photosynthesis
- (iii) Burning
- (iv) Movement of sailing yachts, gliders, parachutes, airplanes
- (v) Generation of electricity by windmills

Question 9:

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

Answer 9:

Plants utilize carbon dioxide present in the atmosphere for the process of photosynthesis. They release oxygen in the atmosphere. This oxygen is inhaled by humans and in turn, carbon dioxide is exhaled.



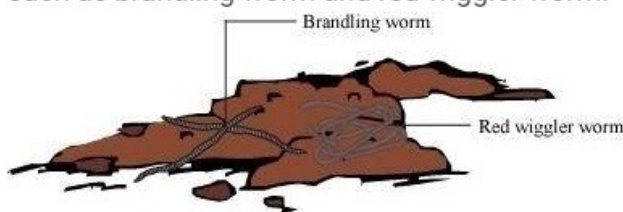
In this way, plants and animals help each other in exchange of gases in the atmosphere.

Question 1:

- Which kind of garbage is not converted into compost by redworms?
- Have you seen any other organism besides redworms in your pit? If yes, try to find out their names. Draw pictures of them.

Answer 1:

- The garbage which contains pieces of cloth, broken glass, aluminium wrappers, polythene bags, nails, broken toys, and old shoes cannot be converted into compost by red worms.
- Yes. A pit might contain other soil microbes such as bacteria, other species of earthworms such as brandling worm and red wiggler worm.



Question 2:

Discuss:

- Is garbage disposal the responsibility only of the government?
- Is it possible to reduce problems relating to the disposal of garbage?

Answer 2:

- Proper disposal of garbage should be a concern of every citizen, and not just of the government. Each and every individual must reduce activities that pollute the environment. A lot of waste is generated from homes, offices, schools, hospitals, etc. It includes food waste, paper, plastic, glass, metal, etc. Therefore, it is required that every individual must reduce the production of wastes and must help in the proper disposal of these wastes.
- Yes, it is possible to reduce problems related to disposal of garbage. Here are some steps that can be observed by every individual to reduce the problem of garbage disposal.
 - Avoid using plastic bags. Encourage shopkeepers to use paper bags or always carry a cloth or jute bag while shopping.
 - Save paper. Use both sides of paper to write.
 - Use separate bins for recyclable and non-recyclable waste.
 - Kitchen waste that includes fruit and vegetable peels, waste food, tea leaves, etc. can be used to make manure.
 - Encourage your family, friends, and others to follow proper disposal practices.



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Question 3:

- (a) What do you do with left over food at home?
- (b) If you and your friends are given the choice of eating in a plastic plate or a banana leaf platter at a party, which one would you prefer and why?

Answer 3:

- (a) Left over food can be collected and used to make compost. Compost provides nutrients essential for the growth and development of plants.
- (b) We would prefer to eat food in a banana leaf platter. This is because a leaf platter is a harmless substance that can be used to make manure by the process of composting, whereas plastic plates cannot be converted into harmless substances by composting. They remain in the environment and create many problems.

Question 4:

- (a) Collect pieces of different kinds of paper. Find out which of these can be recycled.
- (b) With the help of a lens look at the pieces of paper you collected for the above question. Do you see any difference in the material of a recycled paper and a new sheet of paper?

Answer 4:

- (a) All type of paper can be recycled.
- (b) It is impossible to find out the difference between a recycled and a new sheet of paper. However, it is believed that recycled paper is usually of low quality.

Question 5:

- (a) Collect different kinds of packaging material. What was the purpose for which each one was used? Discuss in groups.
- (b) Give an example in which packaging could have been reduced?
- (c) Write a story on how packaging increases the amount of garbage.



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Answer 5:

- (a) The different kinds of packaging materials commonly used includes:
 - (i) plastic bags for carrying eatables or other household things
 - (ii) cloth or jute bags for carrying fruits, vegetables, or other groceries
 - (iii) paper bags for carrying small groceries, packing of food, etc.
- (b) The usage of plastic bags must be reduced as packaging of cooked food items in plastic bags might affect our health. Also, plastic bags are non-recyclable and burning of plastic bags may release harmful gases that can cause many health diseases.
- (c) Packaging increases the amount of garbage as we keep on throwing the packaging materials carelessly on roads and other places. Also, since these packaging materials (mainly plastic covers) are non-recyclable, they keep lying on the roads and cannot be properly disposed off. Sometimes, they get into drains and sewer systems and block them, creating more problems.

Question 6:

Do you think that it is better to use compost instead of chemical fertilizers? Why?

Answer 6:

Yes, it is better to use compost instead of chemical fertilizers. This is because compost is prepared from plant and animal wastes, therefore, it easily gets decomposed. It does not add any harmful chemicals to the soil, whereas an excessive use of chemical fertilizers causes soil and water pollution.