

CBSE NCERT Solutions for Class 8 Science Chapter 18

Back of Chapter Questions

1. What are the different ways in which water gets contaminated?

Solution:

Water gets contaminated in different ways which include:

Industrial wastes:

Several harmful chemical wastes are released into water bodies by industries, hence polluting them.

Sewage wastes:

The sewage wastes include wastes discarded from kitchen, toilets, and laundry also contribute to water contamination.

Agricultural wastes:

The usage of excess quantities of pesticides and fertilizers for the purpose of increasing crop production by farmers also contribute to contamination of water. When excessive rains or floods wash of these chemicals present in the soil into the water bodies, it results in water contamination and further pollution upon excessive exposure to such chemicals.

2. At an individual level, how can you help reduce air pollution?

Solution:

As an individual, I can help in reducing air pollution by:

- i) Segregating and disposing of the garbage and avoid burning of the garbage.
- ii) Replacing the usage of petrol and diesel with clean fuels such as CNG and LPG.
- iii) By not using vehicles when not necessary such as for short distances.
- iv) By using public transport whenever it is possible.
- v) Keeping a check on emissions from the vehicles and household chimneys.

3. Clear, transparent water is always fit for drinking. Comment.

Solution:

Clear, transparent water is not always fit for drinking. Even though the water appears clear, it might contain certain disease-causing microorganisms along with dissolved impurities. In order to make water fit for drinking, it is best to purify the water by boiling or by using purifying systems.

4. You are a member of the municipal body of your town.

Make a list of measures that would help your town to ensure the supply of clean water to all its residents.

Solution:

Few measures that can be taken in order to ensure the supply of clean water to all residents in my town are:

- i) A clean surrounding with proper maintenance must be available where the main water source has to be built.
 - ii) For purification of water must be done using chemical methods such as chlorination.
 - iii) The vicinity of the water pipes must be clean.
5. Explain the differences between pure air and polluted air.

Solution:

| Pure air | Polluted air |
|--|---|
| Pure air consists of about 78% Nitrogen, 21% Oxygen and 0.03% Carbon dioxide. There are also other gases present in small quantities such as Argon, Methane, Ozone and Water vapors. | Polluted air has altered composition of Nitrogen, Oxygen, and Carbon dioxide due to the addition of harmful gases such as nitrogen dioxide, sulphur dioxide, carbon monoxide, and other particulate matter. |

6. Explain circumstances leading to acid rain. How does acid rain affect us?

Solution:

The burning of coal and diesel which are fossil fuels result in the release of several pollutants such as oxides of sulphur and nitrogen. These gases interact with atmospheric water vapour to form sulphuric acid and nitric acid respectively. When it rains, these acids also come down to earth.

The effects of acid rain are:

- i) It causes damage to the crops
- ii) It leads to corrosion of structures, buildings and monuments like Taj mahal, which is made of marble.

7. Which of the following is not a greenhouse gas?

- (a) Carbon dioxide
- (b) Sulphur dioxide
- (c) Methane
- (d) Nitrogen

Solution:

- (d) Nitrogen is not a greenhouse gas.

8. Describe the 'GreenHouse Effect' in your own words.

Solution:

Greenhouse effect causes an overall increase in the average temperature of the Earth, i.e. global warming. This is due to the greenhouse gases such as carbon dioxide, methane, water vapour and nitrous oxide. These gases are found in the atmosphere. The Earth releases the radiation obtained from the sun back into the atmosphere after absorbing some of it. The released radiations are trapped by the greenhouse gases which does not allow the heat to escape resulting in the warming of the planet helping humans to survive. When the amount of greenhouse gases increases, it leads to overall increase in the Earth's temperature leading to global warming.

9. Prepare a brief speech on global warming. You have to deliver the speech in your class.

Solution:

Global warming is the increase in the average temperature of the surface of Earth resulting in the increase in the concentration of greenhouse gases in the atmosphere. The greenhouse gases are carbon dioxide, methane and water vapour. These gases are found in the atmosphere. The Earth releases the radiation obtained from the sun back into the atmosphere after absorbing some of it. The released radiations are trapped by the greenhouse gases which does not allow the heat to escape, resulting in the warming of the planet, helping humans to survive. When

the amount of greenhouse gases increases, it leads to overall increase in the Earth's temperature leading to global warming.

10. Describe the threat to the beauty of the Taj Mahal.

Solution:

The major threat to the beauty of the Taj mahal is Acid rain. The acid rain that falls on the marble monument of Taj mahal, they react with each other to form a powder like substance which is washed away by the rain and this phenomenon is called marble cancer. The other threat to Taj mahal is from the Mathura oil refinery which emits soot particles leading to the yellowing of marble of the Taj mahal.

11. Why does the increased level of nutrients in the water affect the survival of aquatic organisms?

Solution:

The increased population of algae (algal bloom) results from the increased level of nutrients in the water thus affecting the survival of aquatic organisms. These algae serve as nutrients to the decomposers when they die which leads to a decrease in the level of dissolved oxygen in the water as lot of oxygen is taken up in the process of decomposition. This leads to the death of fish and other aquatic organisms.

