8th Standard- Science

Pollution of Air and Water

Air consists of a mixture of gases. By volume, about 78% of this mixture has nitrogen gas and about 21% is oxygen. Carbon dioxide, argon, methane, ozone, water vapour are also present in very small quantities.

Air Pollutants: The substances which contaminate the Eiir Eire called air pollutants.

pollutants may come from natural sources (as forest fires or volcanic eruptions) as well as by human activities.

Carbon monoxide, nitrogen oxides, carbon dioxide, methane and sulphur dioxide Eire the major pollutants of air.

Carbon Monoxide

- It is produced by the incomplete burning of fossil fuels such as petrol, diesel, etc.
- It is poisonous gas, it reduces the capacity of the blood to transport oxygen.

Smog

- It is made up of smoke and fog. Smoke is made up of oxides of nitrogen and other pollutants.

- It causes breathing difficulties such as asthma, cough and wheezing in children.

Sulphur Dioxide

- It is produced by combustion of fuels like coal in power plants. Petroleum refineries Eire a major source of gaseous pollutants like sulphur dioxide Eind nitrogen dioxide.
- It can cause respiratory problems including permanent lung damage.

Chlorofluorocarbons (CFCs)

- These are used in refrigerators, air conditioners, and aerosol sprays.
- CFCs damage the ozone layer of the atmosphere.

Tiny Particles

- These particles are produced by industrial processes like steel making and mining.
- These remain suspended in the air for long periods Eind reduce visibility.

Acid Rain: Oxides of sulphur Eind nitrogen react with water vapour present in the atmosphere to form sulphuric acid and nitric acid. When these come down with the rain, it makes the rain acidic. This is called acid rain.

Marble Cancer

- Acid rain has resulted in corrosion of the marble of the Taj Mahal. The phenomenon is called Marble cancer.

- Suspended Particulate Matter (SPM) emitted by the Mathura Oil Refinery, has contributed to the yellowing of the marble.

An increasing amount of carbon dioxide gas in the atmosphere is responsible for global warming. It has resulted in rising in sea-levels, reduction in rainfall and proved to be a serious threat to the existence of life on the Earth.

Greenhouse gases: Besides CO_2, other gases like methane, nitrous oxide, water vapour also contribute to the greenhouse effect. They are also called Greenhouse gases.

Water Pollutants: Sewage, agricultural chemicals and industrial waste are some of the major contaminants of water.

Ganga Action Plan: It is an ambitious plan to save the river, Ganga. It was launched in 1985.

Water Conservation: Water is a precious natural resource. We must learn how to conserve it, following the mantra—reduce, reuse and recycle (3Rs).

Air Pollution: When the air is contaminated by unwanted substances which have a harmful effect on both the living and non-living components, it is referred to as air pollution.

Chemical Contamination: Discharge of harmful chemicals into rivers and streams causing pollution of water is called chemical contamination.

Global Warming: The average temperature of the Earth's atmosphere is gradually increasing due to increasing levels of greenhouse gases like CO_2. This is called global warming.

Green House Effect: The trapping of radiations by the Earth's atmosphere due to increasing levels of gases like CO_2 is called the greenhouse effect.

Pollutants: Pollutants are the substances which cause pollution.

Potable Water: Water which is purified and fit for drinking is known as potable water.

Water Pollution: Water-pollution is the contamination of water by those substances which are harmful to life.