



G.D.GOENKA PUBLIC SCHOOL

Subject: Science (8th)

Monday, 8th November, 2021

Topic: Pollution in Environment

This material is not to be printed

LEARNING OBJECTIVE: To understand about the pollution in Environment.

SKILL FOCUS: Classification of different types of pollution.

Environmental pollution can be defined as undesirable changes that happen in the surrounding. These changes have negative and adverse effects on animals, plants, and other physical and biological components of the environment.

Pollutants can either be present in gaseous, solid, or liquid form. A substance can also be classified as being a pollutant when the concentration of that substance is greater than its natural levels. Also, this increase in the concentration of the substance can be caused due to natural or human activities.

Apart from air and water pollution, there are other different types of pollution. The different types of pollution are:

1. Light pollution
2. Sound pollution
3. Soil pollution

AIR POLLUTION:

Air pollution can be explained as the introduction of organic molecules, pollutants, and other harmful substances into the atmosphere of the earth. The sources of air pollution can also be classified into two types. These types are:

1. Natural (For example, dust storms, forest fire, and volcanic activity)
2. Man-made (For example, homes, power plants, industries, transportation, and oil refineries)
- 3.

AIR POLLUTANTS:

Carbon Monoxide and Carbon Dioxide

Some sources of carbon monoxide are incomplete combustion of carbon-containing compounds, like fuels and other toxic air pollutants. Carbon dioxide, on the other hand, can be produced as a by-product of burning fuels like coal, wood, natural gas, oil, and gasoline. It can also be produced during deforestation and cement production.

Nitrogen and Sulphur:

Both sulphur dioxide (SO₂) and nitrogen dioxide (NO₂) are major pollutants of air. Some sources of sulphur and nitrogen dioxide are the combustion of fossil fuels like coal in power plants and petroleum refineries. There are also various effects of nitrogen and sulphur dioxide, including acid rain, respiratory diseases like permanent lung damage, and photochemical smog-like breathing difficulties.

Smog:

Smog is the combination of fog and smoke. There are different types of smogs. These types of smogs are:

1. **Photochemical Smog** - Photochemical smog is mainly found in areas that have a sunny and dry climate. It is caused due to a large number of automobiles. It is also the result of chemical interactions between sunlight and nitrogen oxides.
2. **Classical Smog** - Classical smog occurs in areas that have a humid climate and high concentrations of sulphur oxides in the air. It is the combination of fog, smoke, and sulphur dioxide gas.

Particulate Matter:

It can be defined as particles of liquid or solid that remain suspended in water, gas, or air. Dust, debris, pollens, smoke, and acid droplets are some examples of particulate matter. Causes of particulate matter are construction, combustion, power plants, road dust, agricultural activities, industries, and deforestation. Particulate matter can cause birth defects, heart diseases, respiratory diseases, and asthma