Cause and Effect Essay Examples For Middle School

Air Pollution Poignant Matters

Air pollution refers to a chemical, physical or biological alteration to the atmospheric air. It results whenever harmful gasses, smoke, or dust enters the atmosphere and in turn, hinders the survival of animals and plants as the air contains toxic substances.

The survival of human beings and animals greatly depend on the combination of gasses in the atmosphere; slight disruption of this composition can cause devastating effects on their existence. An imbalance in these atmospheric gasses is known to result in global warming, a great threat to the contemporary world. We cannot underestimate the effects air pollution has on the ozone layer which largely contributes to the existence of organisms on the planet.

Causes of Air Pollution

For the causes of air pollution to be well articulated, it is important to delve into the types of air pollutants. Air pollutants can be caused by secondary and primary sources. If a process directly results to pollution, then this forms the primary source. For instance, factories emit sulfur dioxide which is a primary source of air pollution. Reactions and interactions between primary sources form the secondary pollutant. For instance, the intermingling of primary pollutants forms smog which is a secondary pollutant.

Burning of fossil fuels

The main cause of air pollution is burning of coal, gasoline, petroleum, and other fossil fuels. These fuels are the main cause of acid rain, smog, greenhouse gas emissions, and presence of heavy metals in the air.

Fossil fuels form an important part of the society; they are used in transportation, heating, manufacturing, and even in electricity generation. This makes them an important part of the society making it difficult (but not uncontrollable) to curtail. In modern society, the use of fossil fuels can be made so that its burning becomes efficient, but this comes with a monetary cost. It is important to note that unless alternative cleaner option is found, we will have the future facing the same problems of pollution.

Increased use of motor vehicles, and emission of nitrogen

Vehicles use fuel which sometimes is not completely burnt in the engine; therefore, they release VOCs (Volatile Organic Chemicals) into the air. VOCs and nitrogen are a common source of air pollution.

Decomposition of garbage and solid wastes

Disposal sites containing biodegradable substances are known to emit methane gas into the atmosphere. Methane gas is known to be a harmful gas, it is highly flammable and a potential disaster to the ozone layer. Garbage and other household products release VOCs to the air.

Natural causes

Air pollution can come from natural sources such as dust, wildfires, and volcanic activity. Wildfire is known to emit VOCs and particulates into the atmosphere. Volcanic eruptions spew sulfur dioxide and volcanic ash into the atmosphere. Volcanic ash is usually dumped in the upper atmosphere, and as a result, global temperatures are lowered. However, pollution resulting from natural causes remains in the atmosphere for a short period and does not result in a permanent change as it might be the case with human activity-based pollution.

Effects of Air Pollution

1. Respiratory infections

Air pollution is the leading cause of respiratory diseases. Exposure to air pollutants can cause lung cancer and even asthma. Asthma can lead to death if not well treated, as it might cause difficulty in breathing. A prolonged exposure of pollutants can cause lung cancer.

2. Global warming

The rise in sea level, rising temperature in the world, and the melting of ice glaciers are the evidence for the global warming. Global warming is a direct effect of air pollution in the world. The only way to curb this increasingly destructive menace is to reduce air pollution.

3. Depletion of ozone layer

With the greenhouse effect which is the major contributor of the release of chlorofluorocarbon into the atmosphere has led to the depletion of ozone layer. This layer is important in shielding the earth from the destructive ultraviolet (UV) radiations.

4. Formation of acid rain

Emission of harmful gasses such as sulfur dioxide and nitrogen into the atmosphere lead to the formation of acid rain. It is quite common for rain water to have sulfuric acid due to rampant cases of air pollution in the modern society. Acid rain is a major threat to the aquatic life as well as human beings.

There are carcinogenic substances in the acid rain, and it has devastating effects to even metal which can be observed by the extent of corrosion that often results.

5. Eutrophication

Air pollutants such as nitrogen oxide speed up the growth of algae on the water surface. This growth competes with aquatic life for oxygen, therefore, posing a major threat to fishing. The only way to reduce the devastating effects of air pollution will be to come up with effective ways of reducing air pollution.

Earth's atmosphere has a self-regulating mechanism that ensures sequestration of carbon among other pollutants. The mechanism works to ensure that the ecosystem is not affected by the changes occurring in the atmosphere. However, if people continue to add more pollutants than the earth is able to remove, then the response will be increased smog, acid rain, global warming and a number of health problems.