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PROJECT 

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## **Raniganj Girls' College**

**Course Name: Environment Studies**

**Course Code: AEE101**

**Topic of the project: Air pollution in my locality**

### **A Project Report**

**Submitted by Semester-I students (Academic Year 2021-22)**

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## CERTIFICATE

This is to certify that this project titled “Air pollution in my locality” submitted by the students for the award of degree of B.A. Honours/ Program is a bonafide record of work carried out under my guidance and supervision.

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Place: Raniganj

Date: 18.03.2022



Assistant Professor, Department of Zoology

Signature of the supervisor with designation and department

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1  
AIR POLLUTION

IN THE AREA

OF RANIGANT

AND ITS

QUALITATIVE

MEASUREMENT

# INTRODUCTION

Air pollution is the presence of substances in the atmosphere that are harmful to the health of humans and other living beings, or cause damage to the climate or to materials. There are different types of air pollution - such as gases (such as ammonia, carbon monoxide, sulfur dioxide, nitrous oxides, methane and chlorofluorocarbons), particulates (both organic and inorganic) and biological molecules. Air pollution may cause diseases, allergies and even death to humans; it may also cause harm to other living organisms such as animals and food crops, and may damage the natural or built environment. Both human activity and natural processes of burning fossil fuels, use of electronic vehicles, deforestation etc. can reduce air pollution to a major extent. Harnessing renewable sources of energy helps to keep the environment clean and healthy.

# AIR

# POLLUTION

Air pollution is the contamination of air due to the presence of substances in the atmosphere that are harmful to the health of humans and other living beings or cause damage to the climate or to materials. There are many different types of air pollutants, such as gases.

Air pollution can cause diseases, allergies, and even death to humans, it can also cause harm to other living organisms such as animals and food crops, and many damage the natural environment.

Both human activity and natural processes can generate air pollution.

Air pollution is a significant risk factor for a number of pollution-related disease, including respiratory infections, heart-diseases, COPD, stroke and Lung cancer:

Growing evidence suggests that air pollution exposure may be associated with reduced IQ scores, impaired cognition, increased risk for psychiatric disorders such as depression and detrimental perinatal health. The human health effects of poor air quality are far reaching but, principally affect the body's respiratory system and the cardiovascular system. Individual reactions to air pollution depend on the type of pollutant a person is exposed to, the degree of exposure and the individual's health status and genetics.

Outdoor air pollution alone causes 2.1 to 4.21 million death annually, making it one of the top contributors to human death. Overall, air pollution causes the death of around 7 million people worldwide each year, or a global mean loss of life expectancy (LLE) of 2.9 years, and is the world's largest single environmental health risk.

Indoor pollution and poor urban air quality are listed as two of the world's worst toxic pollution problems in the 2008 Blacksmith Institute World's Worst Polluted.



Places report. The scope of the air pollution crisis is enormous: 90% of the world's population breathes dirty air to some degree. Although the health consequences are extensive, the way the problem is handled is often haphazard.

# SOURCES OF AIR POLLUTION

## Anthropogenic (human-made sources)

These are mostly related to the burning of fuel.

- Stationary sources include:-
  - Smoke stacks of fossil fuels and biomass power stations (see for example environmental impact of the coal industry)

- burning of traditional biomass such as wood, crop waste and dung - (in developing and poor countries, traditional biomass burning is the major source of air pollution.
- manufacturing facilities (factories)
  - waste incineration (incinerators as well as open and uncontrolled fires of mismanaged waste, making up about a fourth of municipal solid terrestrial waste).
  - furnaces and other types of fuel-burning heating devices.

## Natural Sources

- Dust from natural sources, usually large areas of land with little vegetation or no vegetation.
- Methane, emitted by the digestion of food by animals, for example, cattle.
- Smoke and carbon monoxide from wild fires; smoke from uncontrolled biomass combustion can make up almost 75% of all air pollution by concentration.

## Emission factors.

Air pollution emission factors are reported representative values that attempt to related the quantity of a pollutant released to the ambient air with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance or duration of the activity emitting the pollutant.

Such factors facilitate estimation of emissions from various sources of air pollution. In most cases, these factors are simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages.

# CAUSES OF AIR POLLUTION

Following are the important causes of air pollution

- (i) **Factories and Industries:** - factories and industries are the main source of carbon monoxide, organic compounds, hydrocarbons and chemicals. These are released into the air degrading its quality.
- (ii) **Vehicular Exhaustion:** - cars, trucks and other vehicles with engines causes air pollution. The exhaust from these contains carbon monoxide. This type of air pollution causes respiratory health problem and holes in the ozone layer, which increases the exposure to the other sun's harmful rays.
- (iii) **Burning of fossil fuels:** - The combustion of fossil fuels emits a large amount of sulphur dioxide. Carbon monoxide released by incomplete combustion of fossil fuels also result in air pollution.

# OBJECTIVE

- Our objectives for doing this project is to express our disapproval of air pollution as it has been the biggest cause of global warming so far. Things like green house gases and car exhaust are the most common causes for air pollution.
- Protect and enhance the quality of air by sources and also protect public health and welfare while fostering a beneficial productive capacity.
- Prevention, control and abatement of air pollution.
- If we do not stop air pollution, the ice caps in the north pole will eventually melt and the sea level will rise, thus flooding the lowlying countries. It will kill many animals like polar bears.
- Air pollution is also destroying the ozone layer and lots of animals thus we want to reduce it.

# EXPERIMENTAL SETUP FORMATION

Air pollution is a mixture of solid particles and gases in the air car emissions; chemicals from factories, dust, pollen and mold spores may be suspended particles.

■ Today I do air pollution experiment.

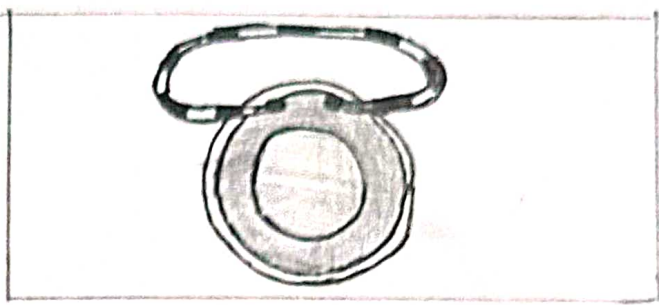
So, I need some necessary things as -

- (i) Three paper plate
- (ii) A vaseline
- (iii) Three long tape.

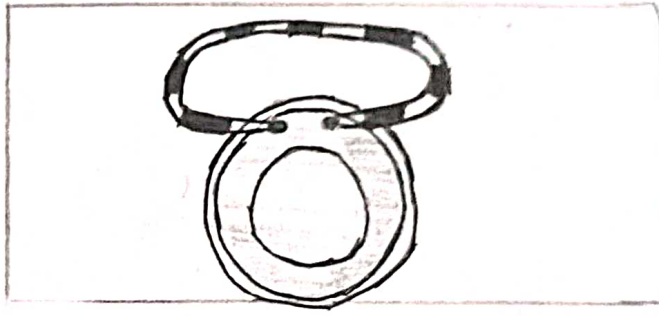
■ At first, I do two holes in one paper plate, similarly four holes make in other two paper plate. Then take a long tape, therefore put the tap in this in this hole in those plate. After this the front side of this three plate apply the vaseline in whole of the front side in those paper plate. Then we need find a place where you can take and also catch the pollution. I think that this project must be done at near our main road, play ground and home.

# AIR POLLUTION IN DIFFERENT PLACES

MAIN  
ROAD



PLAY  
GROUND

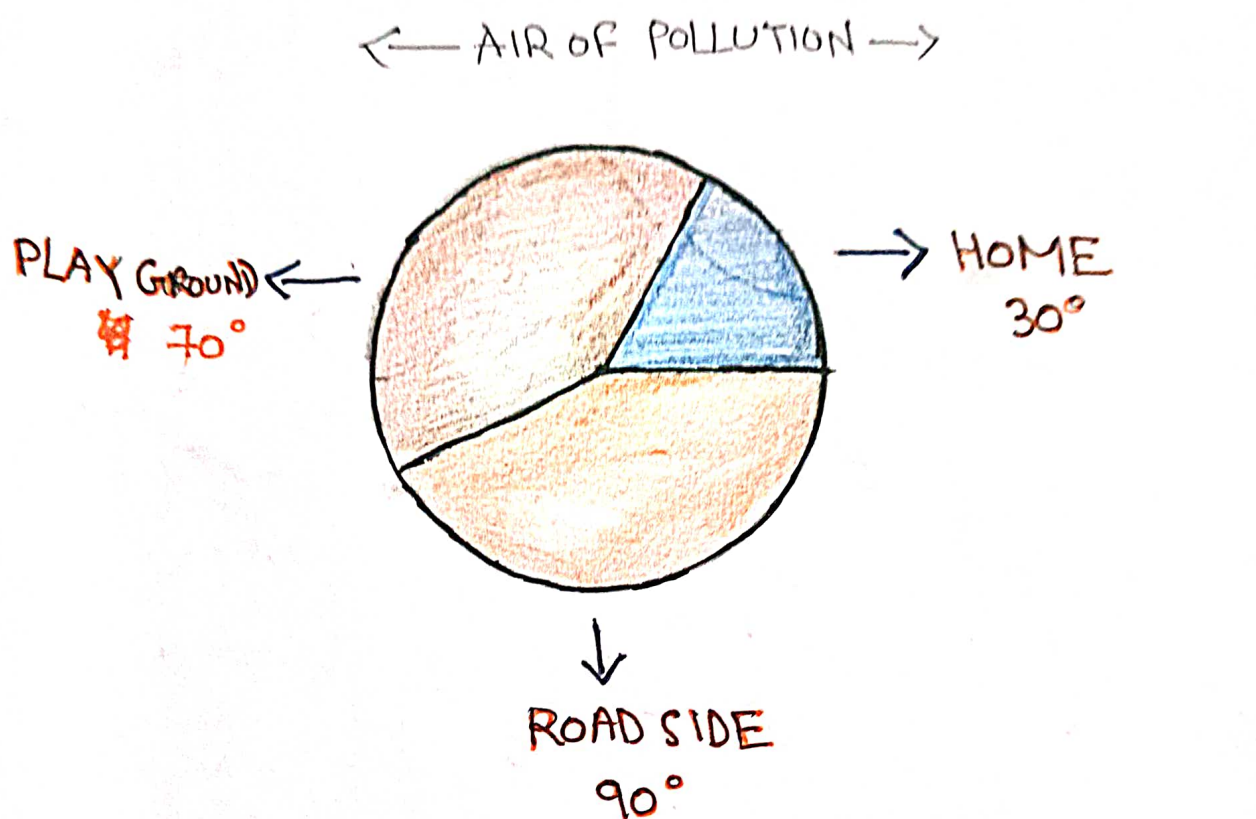


HOME






# DIAGRAMATIC REPRESENTATION OF PIE CHART OF POLLUTION IN THREE DIFFERENT AREA.

SHOWING THE AIR POLLUTION IN OUR LOCALITY (RANIGANJ)



## INDEX

-  - ROAD SIDE
-  - PLAY GROUND
-  - HOME



# INTERPRETATION

The area we live is full of greenery so air pollution level is not the matter of thought to us. Where air pollution is mainly found are (i) Main roads

(ii) play ground

(iii) Home

■ As per my survey on vehicles the pollution level of those places are as follows -

(i) Main road -  $90^\circ$  (Greatest)

(ii) play ground -  $70^\circ$

(iii) Home -  $30^\circ$  (lowest)

■ The place where I live has a lot of traffic on the main road and some factories have sprung up on both sides of main road. Again resulting in high pollution levels on the main road. The playground in this area is surrounded by green trees and the field is a bit away from the main road so the amount of pollution from the main road here is a bit less. There are number of trees in the home and my home is far from the main road so the level of pollution in the home is low.

# CONCLUSION

Air pollution is a major environmental issue. It can affect the health and life support systems as well. Since clean air is an essential factor of life for respiration, it is necessary to prevent the sources of air pollution.

Due to air pollution destructive phenomena like acid rain, global warming etc.

Using appropriate controlling devices and processes the pollutants in the air can be removed.

There are five processes for the removal of particulate matters, settling chambers, cyclone, Electrostatic precipitators, Bag houses and filters and scrubbers for gaseous matters, Absorption, adsorption and combustion processes are used.

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Date :- 15.03.2022

Signature of Student  
Ambika Kumari Sharma

Examined  
*[Signature]*  
18-03-22