I. OBJECTIVES:

1. To assemble a simple air pollutant measuring device
2. To determine the different devices used in measuring air quality

II. DISCUSSION:

There are several devices used to measure air pollution particles. Here are a few commonly used devices along with their definitions:

Particulate Matter (PM) Sensors:

PM sensors, also known as particulate matter sensors or particle counters, are devices used to measure the concentration of particulate matter in the air. They work by drawing air into the sensor and detecting the number and size of particles present. PM sensors are typically classified based on the size range of particles they can measure, such as PM2.5 (particles with a diameter of 2.5 micrometers or smaller) or PM10 (particles with a diameter of 10 micrometers or smaller).

Air Quality Index (AQI) Monitors:

AQI monitors provide a real-time measurement of air quality by monitoring various pollutants, including particulate matter (PM2.5 and PM10), ozone (O3), nitrogen dioxide (NO2), carbon monoxide (CO), and sulfur dioxide (SO2). These monitors use sensors and algorithms to calculate the AQI, which is a standardized scale indicating the level of air pollution and its potential health impacts. AQI monitors are often used by regulatory agencies, researchers, and individuals to assess and monitor air quality.

DustTrak Monitors:

DustTrak monitors are portable instruments used to measure airborne dust and particulate matter concentrations. They utilize a laser technology called nephelometry to detect and quantify the scattering of light caused by particles in the air. DustTrak monitors can provide real-time measurements and are commonly used in industrial hygiene, occupational health, and environmental monitoring applications.

III. MATERIALS:

Clear plastic (better if recycled)

Petroleum jelly

Blank white paper

Tape

IV. PROCEDURES:

1. Coat the top of the white or clear plastic with petroleum jelly

2. Identify a location where you want to test the air and find a place to put the plastic. If you want to test the air outside, you may have to tape your plastic to a heavier object, so it doesn't blow away.

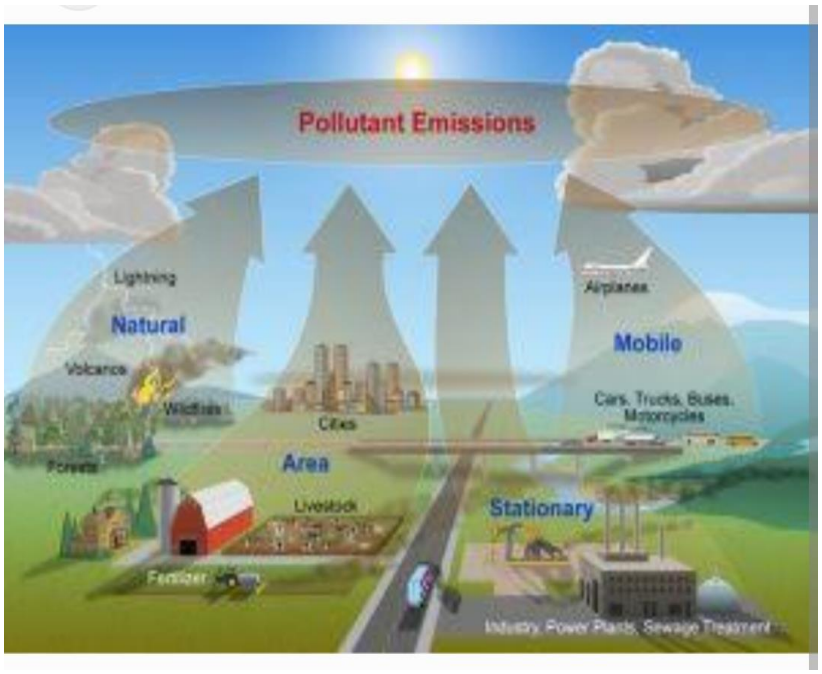
3. Leave your experiment out for at least 24 hours

4. At the end of your experiment time, collect the experiment and bring it inside. If you used a clear piece of plastic, place it on a white sheet of paper.

5. Examine the top of plastic for any particles collected. Try to identify what you see.

V. PICTURES:

Air pollution particles:



Plastic wrapper before 24 hours:

Plastic wrapper after 24 hours:

Location of the plastic wrapper/air pollutant measuring device:

VI. FOLLOW UP QUESTIONS:

1. Find an article about air pollution in the Philippines and make a reflection paper with minimum of four paragraphs.

-In the Philippines, environmental issues have grown to be major concerns in recent years, and we must act to address them. Pollution is among the most urgent issues. The nation is rapidly becoming more urbanized and industrialized, which has raised air and water pollution levels.

Traffic is one of the main causes of air pollution in the Philippines. There are now a lot more cars on the road than there used to be, which raises carbon emissions. Pollutants from factories and power plants also degrade the quality of the air. As a result, respiratory infections and other health issues are becoming more common.

The deterioration of marine habitats is one of the Philippines' biggest environmental issues.

VII. CONCLUSION:

To summarize, the research clearly shows a link between indoor air pollution (IAP) caused by burning biomass fuels and a number of serious health problems, such as lung cancer, COPD, respiratory infections, and tuberculosis. By

Using thorough economic evaluations using methods including the Human Capital Approach, Cost of Illness, and Value of Statistical Life analysis throughout Timor-Leste, Indonesia, and the Philippines, the study highlights the significant financial cost incurred.

because of these negative effects on health. The results highlight the need for focused policy actions to reduce IAP, both to protect public health and because of the significant economic consequences that necessitate coordinated mitigation efforts.

Additionally, the study highlights the applicability.

VIII.REFERENCES:

Arcenas, A., Bojö, J., Larsen, B. A., & Ñunez, F. R. (2010, January 1). The Economic Costs of Indoor Air Pollution: New Results for Indonesia, the Philippines, and Timor-Leste. Journal of Natural Resources Policy Research. https://doi.org/10.1080/19390450903350861