**Week 4 and 5 Air Pollution Research Project Guidelines and Rubric**

**Due on 05/15/2020.**

Please turn in Assignments on time. Take pictures of completed project and email it to me for school records. My email ID is [ssmalik@tusd.net](mailto:ssmalik@tusd.net). Top of Form

**Standards:**

**MS-LS2-5.** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

**Learning Objective:** Students should be able to evaluate critically industrial development to existence of Human Kind/other lives on the earth.

**Guidelines**

To make it easier, I prepared a reference material and sample poster copy is pasted in this document. Students can refer it or can browse internet for information. Which will help them to do a Poster presentation. Some reference sites are given in reference material.

**The components/steps of research Project are – 1. Problem, 2. Hypothesis 3. Background knowledge 4. Procedure 5. Data Collection 6. Analysis & 7. Conclusion. A sample**

Expectations: -Please include the following components in your poster project.

1. Include Photo - images and diagrams that represent your Air pollution.
2. Problem: How does air pollution differ in different environments and compromise health of human beings?
3. Materials: Petroleum jelly or moisturizer or oil, Carton, White paper, Black Marker, Ruler or measuring tape, Scotch tape/ string to fix pieces of carton in a place.
4. Background knowledge: –
5. what is Air pollution?
6. What causes air pollution?
7. Can air pollution harm humans?
8. How does air pollution affect plant and animal habitats?
9. Name five primary air pollutants, and give sources for each.
10. Name the two major sources of air pollution in urban areas
11. Describe how ozone, is formed
12. What is Smog?
13. What are the most polluted cities in the world?
14. Locate regions, where the pollution is highly evident.

**Procedure:**

1. Cut 12 flat pieces of the carton into approximately 3 inches long and 3 inches wide and Cover on of its side with white paper. Using your black permanent marker, draw a 1 inch by 1-inch box in the center. Smear a thin layer of petroleum jelly or Vaseline or oil on to the top surface ensuring the entire surface is coated. At the back of the card, mention the Your name, Period, start date, End date, the location example kitchen.
2. Place each piece of card board in the areas using a string or scotch tape, without covering: Recommended locations are Bedroom, Kitchen, Garage, Backyard, community intersection, Car
3. **Wait 2 days.**
4. **Data collection: Write your observation in each box**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Backyard** | **Garage** | **Kitchen** | **Bedroom** | **Road / Intersection closer to your home** |
| **Pollutant Deposition Quantity on each slide after 2 days** |  |  |  |  |  |
| **Approximate percent Deposition Cover Each Slide** |  |  |  |  |  |

**Analysis:**

1. Write comparative notes of indoor Slides VS outdoors slides.
2. Which sites had the most deposition? And why? Is this what you expected?

**Conclusions:-**

1. What do you think this tells you about the relative air quality at each location?

Browse the world map showing the air quality using the web address given below

<https://waqi.info/#/c/51.649/21.882/5.5z>

To check Air Quality in any City “Let us locate the nearest station” tab. A drop menu gives you list cities closer to you. Then choose the city you like to get information –

Example: - if you have selected Tracy,CA from the list, a page opens up describing the Air Quality in Tracy, CA. Takes notes from it for your project.

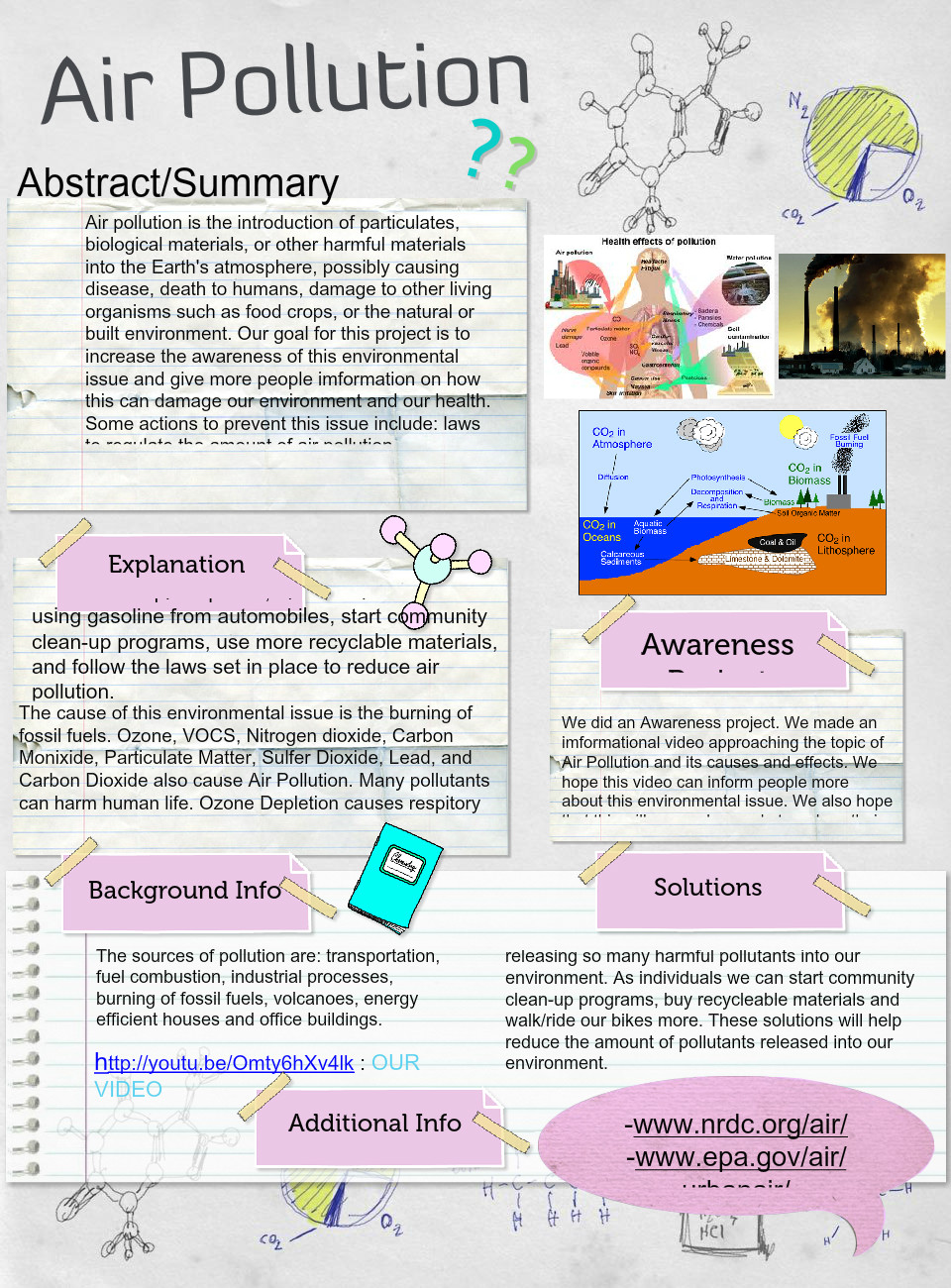


1. How to Protect Your Health
2. How can we reduce pollution?

**Rubric for project is given below.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **4 (Meeting)** | | **3 Approaching** | | **2 Needs Improvement** | | **1 Little Effort** | | **Total Points** |
| **Graphics - Clarity** | | All graphics are in focus and the content easily viewed and identified | | Most graphics are in focus and the content easily viewed and identified | | A few graphics are in focus and the content is somewhat viewed and identified | | No or unclear graphics are included | |
| **Graphics - Relevance** | | All graphics are related to the topic and make it easier to understand. All borrowed graphics and information have a source citation. | | Most graphics are related to the topic and most make it easier to understand. Most borrowed graphics and information have a source citation. | | A few graphics relate to the topic. A few borrowed graphics and information have a source citation. | | Un-related graphics or no source citation | |
| **Content - Accuracy** | | Can accurately explain all possible causes, effects, and solutions related to poster topic | | Can accurately explain most possible causes, effects, and solutions related to poster topic | | Sometimes accurately explain some possible causes, effects, and solutions related to poster topic | | Fails to explain possible causes, effects, and solutions related to poster topic | |
| **Neatness** | | The poster is exceptionally attractive in terms of layout, design, and neatness | | The poster is generally attractive in terms of layout, design, and neatness | | The poster is acceptably attractive though it may be a bit messy | | Poster is very messy. Title is unreadable or not included | |
| **Theme** | | Demonstrates creativity towards the theme presented by the assignment precisely | | Generally demonstrates creativity towards the theme presented by the assignment | | Hardly shows creativity towards the theme presented by the assignment | | Demonstrates no original or creative thoughts | |

This is picture of sample Air Pollution poster project.. Please do not copy this one. We need following **components/steps of research Project 1. Problem, 2. Hypothesis 3. Background knowledge 4. Procedure 5. Data Collection 6. Analysis & 7. Conclusion. A sample**

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