

Investigating Correlation Between Sky Color And Aerosols

Azariyah Robertson, Taraji Smith, Unique Windom,
Ben Cuttitta, Mason Ramos, Athena Bryant,
Rontrell Rucker, Keiantate Melton

7th grade St.Peter's middle School



Abstract

Is there Correlation between Sky color and Aerosols,

Yes,because when I started my project I made a data table and collected data for five days and I at the end I made a graph and

when I looked back at the days of the aerosols and the lower days we're the days that were very pale so my hypothesis was correct I also made a graph.

Research Question and Hypothesis

My research question is: Is There Correlation Between Sky Color and Aerosols I chose this research question. This research is important because we want to know if the air is safer for you to breathe/human health. My hypothesis is Yes. The reason I think they are similar Because Sky color is made from little tiny particles that we aren't able to see, and when particles and aerosols are scattered around they make Sky color. So that is why they are related.

Introduction/Background research

The Sky is usually blue this is because when sunlight reaches the Earth's Atmosphere it gets moved by the particles,gases,and Aerosols in the air. I learned about this from a NASA article called "Why is the sky blue?" It is also important to know what are aerosols. Aerosols are particles or droplets in the air that has airborne dusts,mists and fumes of smoke. I found this on the website for the CDC. I also learned that if there aren't any aerosols clouds wouldn't exist so we wouldn't have any weather and we wouldn't live and I found this on a nasa article called Aerosols impact on clouds.

Experimental Methods

The materials that I used was my

- iPad
- Data table
- Thermometer
- Purple air monitor or map
- Globe protecal

Procedure

1. Take out data sheet.
2. Record date, time, cloud coverage.
3. Look up purple Air reading and log.
4. look out the window and observe visibility, Sky color, and cloud coverage.
5. Put data into graph. (last step)
6. repeat daily

Research and Experimental Methods (continued)

Variables

Independent:: aerosols

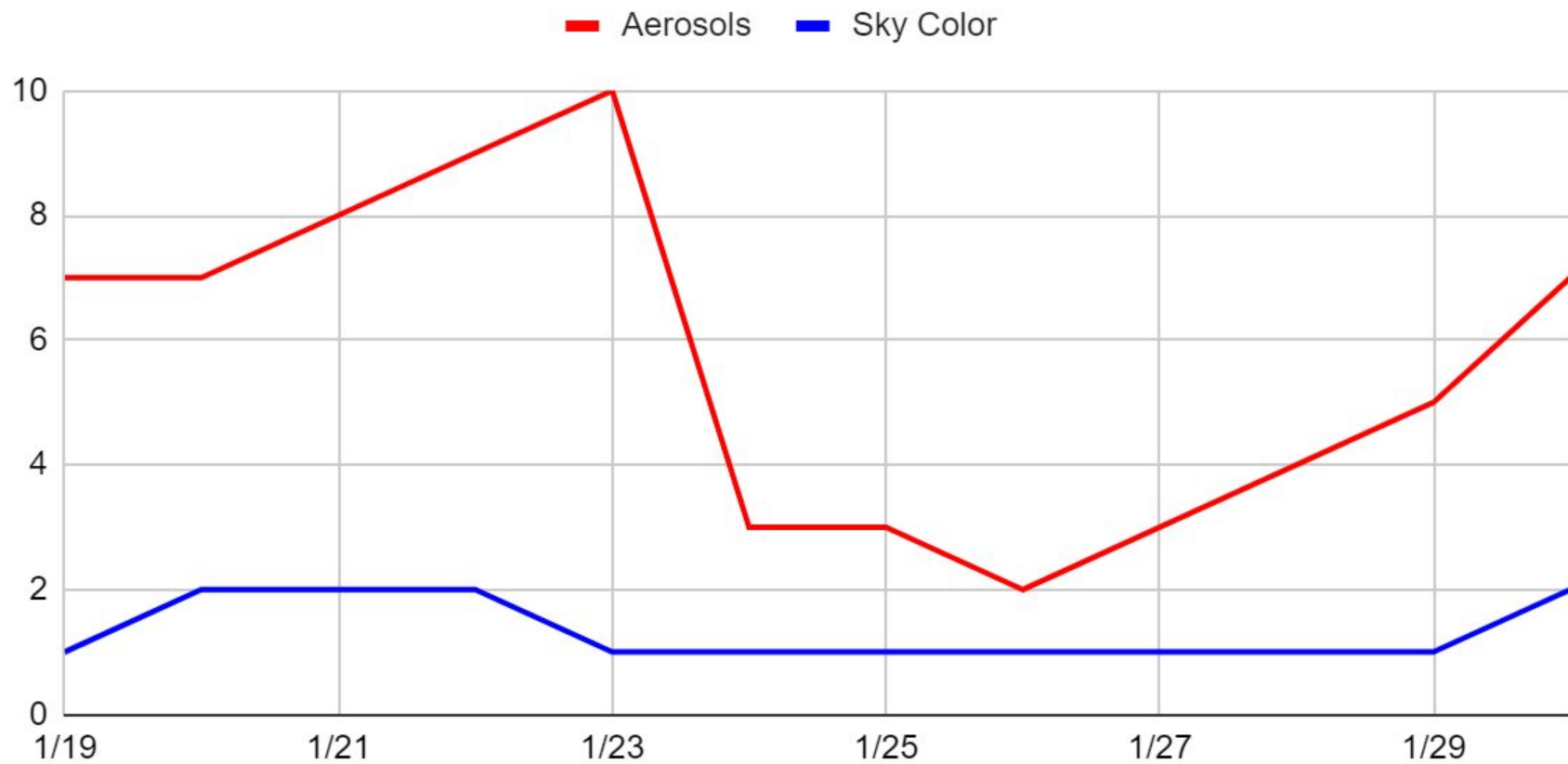
Dependent:: sky color

Constants: location, time

Atmospheric Observations

Date	Time	Cloud Cover	Visibility	Sky Color	Temperature	Observation	Aerosols
1-23-24	1:45	100%	Hazy/fog	Milky	37	Snow day ice rain	8
1-24-24	1:15	100%	Clear	Too white cloudy	47	Rainy	3
1-25-24	1:20	100%	Clear	White milky	54	Wet ground	3
1-26-24	1:05	100%	Somewhat hazy	White milky	54	Misty rain	2
1-29-24	1:10	100%	Clear	White milky	31	Snowing	5

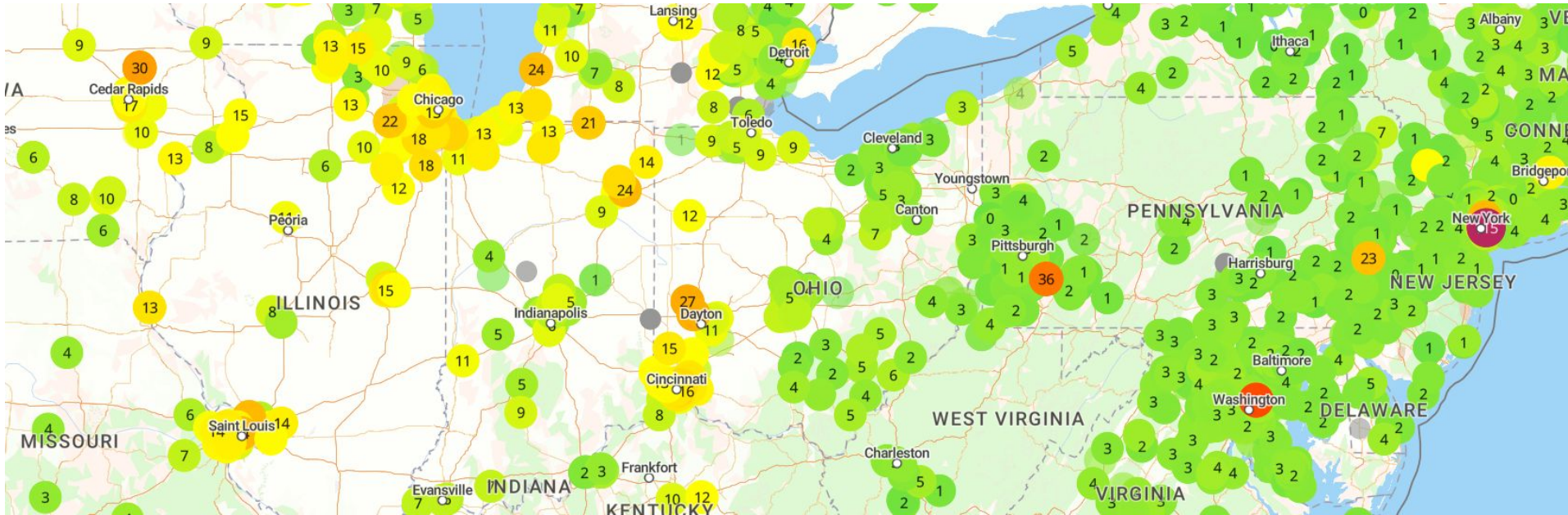
Corretlation between Aerosols and Sky Color



Screenshot of Location of Data Collection



Screenshot of Purple Air



Discussion of Results

Based on the graph I did we took our data at St.Peter's High School from looking out the window on the south side of the school.

The location was in a urban area in January

so it was very cold and cloudy/hazy

It was very hard to see when the sky was very hazy.

My hypothesis was correct because aerosols do effect the sky color

Conclusions

The purple air was lower on the days that were cloudy or hazy because

There were less aerosols in the air so it was less color. I don't really

have a opinion about it then you do it daily and if you wanna try out my experience do it in the spring time so it won't be so cloudy. I would change the layout or the due date because it was very early.

Credits

Thank you to my science teacher Mrs smith she helped me a lot.

And also Mrs Tia she helped me in The free time classes.

Thank you so much to Sara Mierzwiak she helped me with plenty ideas that helped me a lot .

Sources:

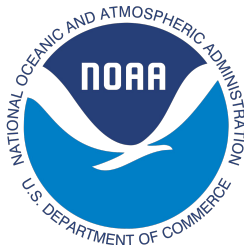
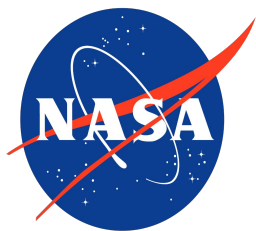
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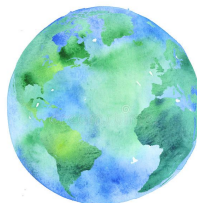
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