Spring 2024 GLOBE Workshop: Atmosphere Changes during the Solar Eclipse in Readyville, Tennessee

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Abstract:

Summary

Students studied clouds and learned how to use a thermometer to track the changes during the solar eclipse of 2024

Background Information:

The energy from the Sun warms up our planet. When there are changes in the amount of sunlight we get, there are also changes in the air temperature, clouds, and wind. A total solar eclipse occurs when the Moon blocks the Sun completely, as on April 8, 2024 in North America. This research was conducted at __Cannon North Elementary in Readyville Tennessee, which experienced ___95_% eclipse cover at (2:00 pm).

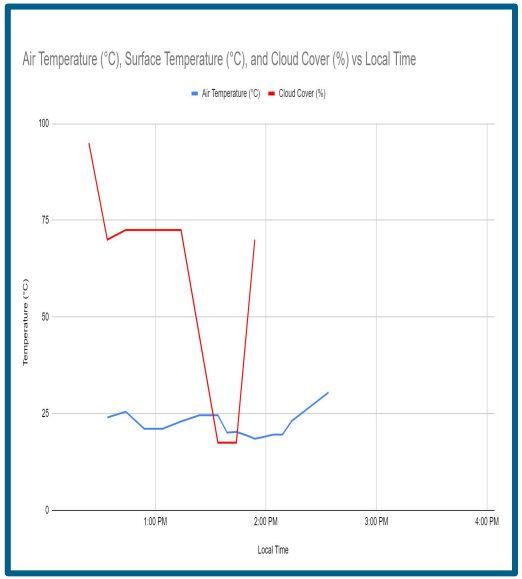
Research Question:

How does air temperature change during a solar eclipse? Did the eclipse cause the change in the cloud coverage?

Claim/Hypothesis:

As the Sun gets blocked by the Moon, the air temperature drops.

Data:



Evidence/Conclusions:

Students noticed that there was about 80% cloud coverage as they began their observations. As the sun was blocked, clouds changed into blue sky with approximately 60% cloud coverage and then to about 30% when the full partial eclipse was observed. The temperature dropped and as the sun was revealed again, then temperature begin to rise .

Next Steps/Future Research:

Students will continue learning about clouds and the atmosphere looking at wind and jet streams related to atmospheric changes. Students would like to take a look at the other Globe areas and specifically the biosphere and pedosphere. How do the suns rays impact life on earth? Students would like to learn how to protect life from the suns rays.

Bibliography/Sources:

The GLOBE Program. *GLOBE Educator One-Week Pacing Guide: Experiencing a Solar Eclipse*. https://www.globe.gov/documents/18527/37661214/Solar+Eclipses