CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY

Name(s)
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Project Number
34004

Project Title
The Dew Point Dilemma

Abstract

Objectives/Goals
To figure out if cars and houses on my block form frost more often than cars and houses a few blocks away. My hypothesis: If I measure dew point within a few blocks from my house, then the dew point will vary.

Methods/Materials
I selected 9 locations that were 1/10th of a mile away from each other using Google Maps. My driveway was the central control location. I made sure that the locations varied from lower to higher elevation. Starting at 6:00 am in the morning, for 8 days I went with my mom to each location to measure the wet bulb and dry bulb temperatures on a sling psychrometer. Then I used the temperature to find relative humidity and dew point for each location on each day. I rotated the order that I went to each location. I also used an anemometer to measure the wind, but found that there was no wind at that time of day.

Results
Overall, the higher elevations had a lower dew point and a lower relative humidity.

Conclusions/Discussion
The control location did have lower dew point and relative humidity than the locations that had a lower elevation. But the control location did not have a lower dew point and relative humidity than the locations that had a higher elevation.

Summary Statement
My goal was to find out why cars and houses in my block appeared to have frost more often than cars and houses a block or two away.

Help Received
The mentors helped me. My mother drove me to the experiments locations. Using Illustrator, she also created the diagram showing each location on the hill -- I told her what I wanted it to look like. She also printed the project text on her work printer.

Preliminary