Name(s)	Project Number
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Project Title

How Clean Is Your Air? Counting Air Pollution/ Particles in the Air Using an Original Particle Scale

Abstract

Objectives/Goals

My objective is to test my hypothesis.
Hypothesis: If air pollution is measured in 4 (four) different locations: a busy highway, a mountain home, a public school, and a park, then the greatest amount of pollution will be found at the busy highway, then the school, then the park, and then the least at the mountain home.

Methods/Materials

Air pollution in the form of visible particulate matter was measured at 4 different types of locations: a home, school, public park, and busy highway. A white, 10 cm x 15 cm (4 in. x 6 in.) index card covered with petroleum jelly was placed at the same height (122 cms, 4 ft.) on a tree or building at each location, at the same time of day (9 a.m. - 3 p.m.) and left for 6 hours. 12 trials were done. The cards were put in plastic baggies when I collected them to save the particles. I made up my own particle scale (like a pH scale) using particle patterns and amounts. It went from 0 (none) to 7 (the most). I used it to rate the cards.

Results

The most pollution particles were found on the cards by the busy highway location- 5.2 on my particle scale. Next most was the park at 2.2, then the school at 1.2 and last the home at .8.

Conclusions/Discussion

My hypothesis was right about the most pollution being at the busy highway and the least at the home. It was wrong about the school being 2nd and the park 3rd. The park was 2nd and the school 3rd. I found that the busiest places with the most cars, businesses and traffic have the most pollution. The pollution at the park could be natural, and I'd like to do another project to study the different types of particles on the cards, in a laboratory. My project shows that we need to use less fossil fuels, and find new cleaner energy sources for our health and the future of our planet.

Summary Statement

My project measured pollution particles in 4 (four) locations with different amounts of traffic and businesses to find out where the most and least air pollution particles are - home, school, park or highway.

Help Received

My teacher Mrs. Bloom gave me forms to help organize my project. My mom helped type my handwritten papers and data sheets, helped me glue papers to the board, and drove me to the four locations.