



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Flora E. Barbash</b>	<b>Project Number</b> <b>J0604</b>
<b>Project Title</b> <b>From Colors in the Sky to Air Pollution</b>	
<b>Objectives/Goals</b> The objective of this project was to see if and how weather causes and / or affects the colors in sunrises and sunsets.	
<b>Abstract</b> <b>Methods/Materials</b> For 30 days, twice a day (at sunrise and sunset) from the same location, using Weather measuring instruments and close observation, I recorded the date, time, temperature, humidity, weather, wind, sunrise/sunset time, barometric pressure and colors and their brightness in the sky. By rating each observation and taking photographs, I made a scale 1-5 (Dull to vibrant). During this process, I went to the library and internet to do research. Using all of the data and information, I made a chart and looked for connections between my recorded data and the weather patterns and colors.	
<b>Results</b> Through a great amount of research, not only did I find out about nature's color spectrum and how the sun's light-rays are different color wavelengths scattering off different types of particles in the atmosphere (forming colors in the sky), I also learned how human activities and natural processes cause air pollution which, in many different ways, harms people, animals, plants, building materials & fabrics, and causes damage to the earth's atmosphere and our environment. (depletion of the ozone layer, greenhouse effect and acid rain)	
<b>Conclusions/Discussion</b> I discovered that weather, along with latitude, time of day, season of year and quality of the air all contribute to the formation of colors in the sky. I'm curious to find out more about the causes and effects of earth's polluted atmosphere and want to continue research to see how scientists are dealing with these serious problems which concerns me about the future and quality of life on our planet.	
<b>Summary Statement</b> I began this experiment to see if the weather effects the colors in sunrises and sunsets, but more importantly, my through research about atmosphere revealed to me the dangers of air pollution to our health and environment.	
<b>Help Received</b> My dad helped me when I needed it on the computer and he printed photographs. My mom helped me by driving me to the libraries and to my interview at the North Coast Air Quality Management District Office in Eureka, as well as some organization,	