



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Natalie D. Tieche	<b>Project Number</b> <b>J0824</b>
<b>Project Title</b> Ash Particulates as Air Pollutants	
<b>Objectives/Goals</b> The purpose of my project is to determine how ashes pollute the air. I will also compare which type of commonly burned materials pollute the most. I theorize that ashes from the agricultural burn site will be the worst pollutants. The reason I am doing this investigation is because the Central Valley of California often struggles with poor air quality.	
<b>Abstract</b> I used the following in my investigation: newspaper ashes, charcoal ashes from a barbeque, fireplace ashes and agricultural burn site ashes. I am using these types of ashes because these materials are often burned in the Valley. I put these materials into clear plastic containers with air tight lids. I then shook the ashes to simulate ashes in the air. After that, I put in contact paper; this was to see what amount of ashes would stay on the contact paper. I weighed the contact paper before and after the experiment. I did this 5 times to each type of ash. I calculated the average weight of the ashes that adhered to the contact paper.	
<b>Methods/Materials</b> I used the following in my investigation: newspaper ashes, charcoal ashes from a barbeque, fireplace ashes and agricultural burn site ashes. I am using these types of ashes because these materials are often burned in the Valley. I put these materials into clear plastic containers with air tight lids. I then shook the ashes to simulate ashes in the air. After that, I put in contact paper; this was to see what amount of ashes would stay on the contact paper. I weighed the contact paper before and after the experiment. I did this 5 times to each type of ash. I calculated the average weight of the ashes that adhered to the contact paper.	
<b>Results</b> When I totaled my results I found that there was an average combined total of 0.211 grams of ashes that stuck to the contact paper. Of that total, 40% was from the charcoal ashes, 31% was from the newspaper ashes, 18% was from the agricultural burn site ashes, and 10% was from the fireplace ashes. I thought the ashes from the agricultural burn site would weigh the most, but they were so heavy they hardly stuck at all, and quickly settled to the bottom of the container.	
<b>Conclusions/Discussion</b> After completeing my project I found that my hypothesis was partly correct and partly incorrect. My hypothesis was correct when I theorized that ashes pollute the air. My hypothesis was incorrect when I theorized that agricultural burn site ashes would make up the greatest percentage of the total amount of ashes that would stick to the contact paper. I conclude that ashes do contribute to air pollution. I also conclude that charcoal ashes from a barbeque and ashes from burned newspaper were the variables that created the greatest amount of air pollution.	
<b>Summary Statement</b> My project is about how different types of ashes contribute to air pollution.	
<b>Help Received</b> My Mom helped type the report; Mr. Carl Gong, Mrs. Sandy Ensley, and Mr. Ed Case helped with ideas and suggestions; Mr. Whittington provided the scale and took pictures of my variables with an Electron Microscope.	