



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Crystal V. Moffitt-O'Neill	Project Number J0920
Project Title Air Quality	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project was to determine whether the road or the woods caused the most polluting particles in the air.</p> <p>Methods/Materials To collect particle samples, four, 4" x 2" inch paper particle collectors with a 2" x 1" inch area of plastic overhead sheeting in the middle were made. The overhead sheet area was coated with a thin layer of petroleum jelly. The collectors were then hung in areas near the woods and the road. The collectors were in ranges of 5' to 8.5' feet from each other. Four days later the collectors were observed under a microscope and the results were calculated then documented in tables and graphs. I thought the use of the microscope would be more useful than it was. I believe that there was not enough power to make that much of a difference, other than making the particles that were collected somewhat larger and more crisp.</p> <p>Results My results were that there were 99% more particles from the road than the woods. The greatest amount of particles found by the road and woods were dirt and seeds, dirt coming from the road and seeds coming from the woods. The particles I was able to see while under the microscope you could see with the naked eye.</p> <p>Conclusions/Discussion My conclusion is that the road does give off more air pollution than the woods. The weather during the collection time was cold and rainy. Results may have changed under warmer, dryer conditions. When we breathe in, we inhale millions of tiny particles. Some particles are larger than others. The larger particles get caught in the hairs of our nose and the smaller particles penetrate to our lungs, which often times causes problems affecting our health. The common health problems caused by the tiny particles are eye, throat, or lung irritation. Which means these areas may become itchy, watery, or sore. People diagnosed with different types of respiratory conditions, such as asthma or bronchitis, may worsen their condition by inhaling these infectious particles. These particles can decrease your capability to fight off cold infections</p>	
Summary Statement My project is about finding what area gives off the most air particles and how those particles affect our health.	
Help Received I received help on this project from my science teacher Ms.Parker with providing the materials. I also received help from both of my parents with spelling, some grammar, and how to use the graph program on our computer.	