



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Aaron A. Tan	Project Number S0612
Project Title Can You Smell the Cancer? A Study of Ozone, Carbon Monoxide, and Nitrogen Oxide Levels in a Parking Garage	
Abstract Objectives/Goals This project is about determining the quality of air in partially enclosed parking garages and whether it is poor enough to cause health problems such as cancer. Methods/Materials To test for nitrogen oxides and carbon monoxide I used a combustion analyzer. The units of measurement were parts per million (ppm). Results After testing the air I discovered that there were very low levels of nitrogen oxides throughout the day. Further research showed that nitrogen oxides react with the oxygen in the air (O ₂) to form ozone (O ₃). Then I tested the air for ozone, using Schoenbein paper. Conclusions/Discussion The results of this experiment showed that at least eight hours of exposure to the air in a partially enclosed parking garage would be detrimental to one's health. Also exposure of only a few minutes a day or a few minutes a week would eventually cause health problems.	
Summary Statement This project is about determining the quality of air in partially enclosed parking garages and whether it is poor enough to cause health problems such as cancer.	
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