



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Jennifer Lam	Project Number J1313
Project Title 6th, 7th, 8th Grade FVC Living with Smokers/Non Smokers: How Much Air Can You Force Out of Your Lungs?	
Objectives/Goals My objective was to determine whether living with a smoker or non-smoker affects your forced vital capacity.	
Abstract	
Methods/Materials <ol style="list-style-type: none">1. Gather all necessary materials needed for the experiment.2. Select students to get tested.3. Make sure that the students understand, fill out, and return the survey.4. The selected students will get tested with the Spirometer.5. Record name, age, gender, height, and weight of each student.6. Turn on the spirometer. Insert the subject's details; age, height, weight, and gender. Insert a mouthpiece to the head house of spirometer and make sure it is tightly fitted. Apply nose clip on subject. Have the subject lean forward and insert the mouthpiece to their mouth and have them hold the spirometer with one hand. Press FVC symbol to start the test.	
Results <p>From my experiment, I found that for 6th grade, they had the least amount of students living with smokers so they had the highest forced vital capacity. For 7th grade, they had the mid-range of students living with smokers, but they had the lowest forced vital capacity. Finally, for 8th grade, they had the highest amount of students living with smokers, but they had a mid-range forced vital capacity between the other two grades.</p>	
Conclusions/Discussion <p>By doing this experiment, I found that my hypothesis was partially right. I learned also that many other factors that can easily change my results and the results can change from a day to day basis. It also helped me learn about social/behavioral science because most students with an exception of a few lived with smokers and interact with them that it can be harmful to their health.</p>	
Summary Statement <p>My experiment was to test the students from each grade level to compare whether living or not living with a smoker affects your forced vital capacity.</p>	
Help Received <p>For my science fair project this year, my science teachers helped me decide which course to take in my project and helped me revise my work.</p>	