



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Aisha Raheem	Project Number J1220
Project Title Go with the Flow!	
Abstract Objectives/Goals I live on a busy intersection, Brookhurst and Hazard, in Garden Grove, California. There is a lot of traffic passing by all the time. I did an experiment for my school science fair, and noticed that my brother had lower expiratory volume than the other boys of his age who live in the suburbs. That got me thinking about the people who live and work on my street. Are we all being affected by the traffic that is always going back and forth? So I decided to take the things that I learned from my earlier project, and apply it to learning about how people are being impacted by the toxic pollution from the traffic. Expiratory volume is a good way to measure a person's lung capacity. Usually, a lower expiratory volume means that a person's lung capacity has been reduced for some reason. Toxins from smoking or pollution on the air from traffic could cause a lower expiratory volume. Methods/Materials I tested the people who live and work in Brookhurst. I measured their expiratory volume in milliliters using a spirometer. I invented disposable mouthpieces and had the people inhale for a couple of seconds. I also had them fill out a form asking them questions (gender, age, height, etc). Results My results showed that there is a definite difference in the groups that I tested. The people of work on Brookhurst seem to have less expiratory volume than those of us who live there. Conclusions/Discussion In conclusion, I was very interested to learn that the people who work on this street have lower lung capacities than those of us who live here. I think this is because workers have doors and windows that face Brookhurst. Their doors could stay open a lot because of customers going in and out. People who live on the street can protect themselves from the traffic emissions by closing their windows, and maybe running their air conditioning.	
Summary Statement Comparing Expiratory volume of people who live and who work on Brookhurst Street, between Hazard and Westminster in Garden Grove, California.	
Help Received Sr. Maryam Abbasi guided me through out the project. My mother helped me make the mouth pieces and helped me paste the board.	