



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Michael J. Chang	Project Number 31502
Project Title The Effect of Low Tire Pressure on Rolling Resistance and Its Contribution to Environmental Pollution	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My hypothesis was that low tire pressure will lead to mor rolling resistance, and an increase in environmental pollution.</p> <p>Methods/Materials The materials used were: a car, gasoline, air, tire pressure gauge and a rolo tape measurer. First, I went to the gas station to prepare for the experiment by filling up the gas tank and filling the tires with 45 psi which was 5 psi over recommended. Next, I went to a remote area and had an adult drive the car at 24kmph at a certain speed and then put the car into neutral, in which I then measured the coasting distance and recorded it. I repeated the process 15 times at each pressure by decreasing the pressure by 5 psi each time. I then recorded my results into my log book.</p> <p>Results My results were that the less air you put in your tires, the less you were going to coast thus making you lose more money on gas and contributing 19 pounds of CO2 every gallon of gasoline you burn.</p> <p>Conclusions/Discussion The conclusion to my experiment was that I found my hypothesis to be correct. Low tire pressure did lead to more pollution according to my results and my research.</p>	
Summary Statement It is about the effect of low tire pressure on rolling resistance and its contribution to environmental pollution.	
Help Received My parents and tutor helped me with my project experiement by driving the car and with my board.	