



# CALIFORNIA STATE SCIENCE FAIR

## 2011 PROJECT SUMMARY

Name(s) <b>Michael J. Chang</b>	Project Number <b>J1103</b>
<b>Project Title</b> <b>The Effect of Low Tire Pressure on Rolling Resistance and Its Contribution to Environmental Pollution</b>	
<b>Objectives/Goals</b> My science project is to determine if low tire pressure will lead to more rolling resistance which means an increase in fuel consumption and contributing more pollution to the environment.	<b>Abstract</b> First, I went to the gas station to prepare for the experiment by filling the gas tank, and filling the tires with 45 Pounds per Square Inches (PSI) which is 5 PSI over the recommended PSI on this car. Next I went to a remote area and tested my experiment 15 times for every PSI I tested. Every time, the adult would drive the car for 24 km at the speed of 24kmph and then put the car into neutral. Then I would measure how far the car had coasted with a rola tape and recorded it in my log book. After, I would let 5 PSI of air out of the tires, repeating the process till I reached 25 PSI.
<b>Results</b> 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 contribute 19 pounds of CO <sub>2</sub> for every gallon of gasoline you burn.	
<b>Conclusions/Discussion</b> In conclusion, I found my hypothesis to be correct. As i inferred from my experiment data and research, low tire pressure did lead to more environmental pollution.	
<b>Summary Statement</b> My science project is to determine if low tire pressure leads to more rolling resistance which means an increase in fuel consumption and an increase environmental pollution.	
<b>Help Received</b> My parents and tutor helped me with my project experient by driving the car and with my board.	