



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Preston D. Neal	Project Number J0114
Project Title Which Automobile Shapes Have the Least Wind Resistance?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project is to determine which shaped car has the least wind resistance. My goal is to figure out which car shape has the least wind resistance.</p> <p>Methods/Materials Materials used to make the wind tunnel included a hairdryer (to create the wind), wood, wire, and Legos (to build auto chassis]. The car bodies were carved with florists foam. A postal scale was used for measuring the force produced. I carved six cars out of foam. One with box shape, one with truck style, another with a dome shape and two that had the lowest profile. When that was done I turned on the hairdryer and when the wind blew the car back, the scale pointer would show the force pulled in grams.</p> <p>Results The results are that a car with a rounded shape and more aerodynamic will have the least wind resistance and a car with a greater frontal area like a truck will have more resistance.</p> <p>Conclusions/Discussion During the time I was testing I saw that the aerodynamics of a car and frontal area does matter. I think that the cars that have a greater frontal area will have an effect on the amount of gas that would be used because a car with a bigger frontal area will need the power to go through the wind. I also think that a car with a less aerodynamic shape will also have to use more gas and power.</p>	
Summary Statement My project is to determine which shaped car has the least wind resistance.	
Help Received My mom helped me organize the board and my mom and dad helped with some typing. My dad also helped build the wind tunnel.	