



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Ravi K. Nidumolu</b>	<b>Project Number</b> <b>J0220</b>
<b>Project Title</b> <b>It Will Blow You Away</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> I wished to see which variables on a vortex cannon ( lip size, diaphragm tension, and distance between cannon and force meter) affected the force produced by the vortex cannon, and what combination produces the most force.</p> <p><b>Methods/Materials</b> I built my own cannon and setup for the measuring device out of plywood, hot glue, nails, and regular thick wood. I tested using four different hypotheses. Three hypotheses were each for a separate variable, and the last was for all of the variables combined (which combination made the most force).</p> <p><b>Results</b> When tested, the variable(s) that I was testing for always made the most force in their hypothesis group.</p> <p><b>Conclusions/Discussion</b> I found out that the smaller the lip size, the more bungee cords you have on each I-hook, and the closest the cannon is fired from the measuring device, the more force will be measured. All hypotheses were proven correct using two-tailed matched pair T-tests.</p>	
<b>Summary Statement</b> I saw which variables on a vortex cannon ( lip size, diaphragm tension, and distance between cannon and force meter) affected the force produced by the vortex cannon, and what combination produces the most force.	
<b>Help Received</b> Rod Atchley(teacher) helped explain statistics, mother,sister helped cut and paste board, Ms. Seales (another science teacher) donated force meter, neighbor helped form question, other neighbor helped make air cannon, measuring device plate.	