



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Brett Isakovic; Chris Warren	Project Number 22311
Project Title The Battle of Aerodynamics: Shapes vs. Wind	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our objective was to show how the amount of air resistance on an object would be affected by its shape. Our hypothesis was that the most streamlined shape, a bullet shape, would have the least amount of air resistance.</p> <p>Methods/Materials In this experiment, we suspended four different shapes (bullet, wedge, sphere, and cube) in front of a high powered fan. We then measured the amount of movement caused by the wind to determine air resistance. We repeated the experiment five times, and then calculated an average measurement for each shape.</p> <p>Results The wedge shape consistently showed the least amount of air resistance with an average of 7.8 degrees, followed by the bullet with 9.0 degrees, the sphere with 12.6 degrees, and finally the cube with 13.1 degrees.</p> <p>Conclusions/Discussion Our hypothesis was only partially correct. Our test results did show that streamlined shapes have lower air resistance. However, our prediction that the bullet shape would have the least amount of air resistance was incorrect. We believe that the greater surface area of the bullet shape affected the amount of air resistance measured; therefore, it affected our results.</p>	
Summary Statement This project shows how air resistance is affected by the shape of an object.	
Help Received For this project, we received help from several people: Chris's mother helped shop for supplies, Chris's dad helped with the project assembly, and my mom help to type the final report.	