



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Tustin K. Moore	Project Number J0118
Project Title To Dimple or Not To Dimple: Can the Distance of a BB Be Improved by Dimpling Its Surface?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this experiment was to determine if dimpling the exterior of a BB will improve the distance it will travel when fired from a BB rifle.</p> <p>Methods/Materials The exterior surfaces of 5 plastic BBs were dimpled and then 5 non-dimpled BBs were used as a control group. Each of the 10 BBs was fired from a rifle 7 times each. The height of the impact on a target placed at the end of a hallway was then measured.</p> <p>Results The results showed that the dimpled BBs hit the target an average of 38% higher than the non-dimpled BBs.</p> <p>Conclusions/Discussion The results of my experiment supported my hypothesis as the dimpled BBs did strike the target at a higher mark. However the trajectory of the dimpled BBs was erratic. By creating a more uniform dimpled pattern, the flight of the BB should be more normal.</p>	
Summary Statement An experiment to see if adding dimples to the exterior of a BB will increase its distance when fired from a rifle.	
Help Received Father helped dimple BBs, set up firing range to test experiment, and helped type report.	