



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Zachary D. Olsen, Jr.	Project Number J0132
Project Title How Does the Fin Size Affect the Trajectory of a Projectile?	
Abstract Objectives/Goals The objective of this project was to determine what fin size will make my rocket go the top velocity, and top height that it will go. Methods/Materials Six different sized fins with the same shape were put on the same rocket, flown three times each and recorded. Every rocket that was flown was propelled by the same amount of thrust with a B4-4 engine. The project shows that I recorded height, velocity, and distance from the launch pad; all the equations that I used were basic common knowledge equations. Results The rocket with the second to the smallest fin went the highest, the smallest fin went the lowest, and the biggest fin went second to the lowest. Conclusions/Discussion My conclusion for this project is that fin size has an important role in stability. The more stability on the rocket more friction. The more friction that the rocket has the total height.	
Summary Statement To find a perfect fin size according to the manufactures fin shape.	
Help Received Mr. Hodges, who mentored me and inspired to put more effort into my board. Crag Baker, who gave me helpful advice, in the field of aerodynamics. Mom for giving me support though out the project.	