



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) William R. Oakley	Project Number S0811
Project Title Railgunz 4 Dummiez	
Abstract Objectives/Goals The objective of this project was to give people a firsthand look at railgun physics and to test the possibility of a small-scale railgun for mundane uses, Ex. Construction. Methods/Materials The railgun and its charging circuit was constructed from some scrap metal and a few disposable cameras. It's effectiveness was measured by allowing the capacitor bank to achieve different charge degrees and measuring the distance traveled by the armature. Results Overall the project was a success as it provided a clear demonstration and explanation of railgun physics, however the railgun i created, while it did work, failed to accelerate the armature past the end of the rails. Conclusions/Discussion My research suggests that railguns could only be feasible on a small scale if a small, high voltage capacitor bank could be assembled for its use. Given the materials i have access to it's impossible to create an efficient railgun.	
Summary Statement This project is a physical model of railguns and the physics that drive them.	
Help Received Father helped me drill rails and taught me to solder electrical components.	