



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Ryan J. Honda	Project Number S1511
Project Title Radioactive Absorption	
Abstract Objectives/Goals The purpose of this experiment was to test the hypothesis that the effectiveness of radioactive shielding improved with materials of greater density, thickness, and atomic number by measuring alpha, beta, and gamma radiation penetration through aluminum and lead absorbers with varying thickness. Methods/Materials The instrument used to to measure the radioactive count was the Geiger-Muller Tube and Counter. Three one minute trials for each source and number of shields was performed for each type of shield. Background noise was subtracted. Results Regression lines of the date averages were plotted and compared. Gamma rays proved to be the most penetrating, followed by beta and alpha particles, respectively. Conclusions/Discussion Results confirmed the hypothesis and showed lead to be the best absorber of radiation, followed by aluminum shields, and aluminum foil.	
Summary Statement This experiment tested the effects of mass absorption of radioactive substances.	
Help Received Used lab and equipment at Ribet Academy	