



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Tyler G. Myers	Project Number J1229
Project Title Linear Acceleration	
Objectives/Goals Can magnets propel a metal ball? If so, what combination of magnet spacing and trigger angle create the most velocity? I believe the ball will go the fastest when the trigger is at its highest point and the magnets are at such a spacing so the ball will hit the next magnet when it is at its top speed.	
Abstract	
Methods/Materials One wooden track, six magnets with about thirty pounds of pulling force each, thirteen steel balls, trigger mechanism, chronograph, sand pit, yardstick. For my methods I'll test every half inch from three inches to ten inches for magnet spacing. Then, I'll test every ten degrees for the angle of the trigger. I'll do this until I find the best average velocity of five shots of each combination.	
Results At eight inches apart the magnets propelled the ball the best. At six inches the ball went almost as far but not quite. At nine inches the ball didn't go nearly as far. Note: Student is conducting additional experiments and collecting more data for updated results and conclusions.	
Conclusions/Discussion The hypothesis was correct. The magnets propelled the ball through the power of kinetic energy.	
Summary Statement My project is about finding out the highest velocity I can reach for a steel ball using magnets.	
Help Received Father helped build wooden track and make data graphs, Mother and Sister helped glue information on science board.	