



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Ever R. Avary	Project Number J0902
Project Title Maglev Madness	
Abstract Objectives/Goals The author wanted to find how much load a magnet can hold and where in the magnetic field it is the most powerful. The author hypothesized that the magnets will drop at a steady rate along with the weight of rice being added, and eventually cap off at around 30mm because of the controlled and steady power of the magnetic field and the magnetic field's tendency to become more powerful at the core of the magnet. Methods/Materials The rig was designed by slicing and slitting pieces of foam core to allow a magnetic platform to float midair. The author then added weights of rice to the magnetic platform and measured the height of the platform in proportion to the weights of rice. Organization of this experiment was a primary goal: *Constant: The constant in this experiment was the height of magnetic platform with no weight. *Controlled Variable: The controlled variable was the use of rice as a weight. *Manipulated Variable: The manipulated variable was the weight applied to magnet platform. *Responding Variable: The responding variable was the height of the magnetic platform. *Trials: There were 11 weights of rice that I tested twice for a total of 22 trials. Results Results showed that as the amount of rice added to the platform was increased, the height of the magnetic platform dropped. At the platform's resting rate, it was at 47mm, and dropped to around 28mm. This experiment is still in progress. Conclusions/Discussion The author concluded that the height of the magnetic platform decreased at a steady rate. For every tablespoon of rice that was added, the height of the platform decreased one millimeter. This experiment showed that as you get closer to the core of the magnet, the gauss levels becomes more concentrated.	
Summary Statement This project tested how much a magnetic platform can carry and where it has the most concentrated gauss.	
Help Received Parents helped purchase supplies and supervised use of Exacto knives.	