CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY

Name(s)
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Project Number
J0817

Project Title
The Power of the "Magic Rock"

Abstract

Objectives/Goals
The objective of my project was to find the exact ratio of a one gram magnet to the mass of various metal rods in increasing increments. By testing the magnet to my smallest rod, I tested each time if the magnet attracted it or not,until I found my average ratio. By finding the ratio, I could use it to predict whether or not a magnet would attract the metal. My goal for the future is to make my results more accurate and prove my ratio to be true with different types of magnets.

Methods/Materials
a centimeter ruler
* magnets with masses starting with about 1g up to 120g.
* metal rods (cut) starting at 7/10cm to 10cm going up in increments of 7/10 cm.
* Extra Metal Rods; about 4 feet altogether
* flat surface that is not metal (plastic or wood is preferred)
* mass scale

Results
All in all, after testing for the ratio of mass of magnet to the mass of the metal rod; it turned out that a magnet can pull, on average, 8.70 times its own mass.

Conclusions/Discussion
In conclusion, I thought that it would take more magnetic mass than mass of the metal in order to attract it. It turned out that I under estimated the power of the "Magic Rock", it could actually pull, on average, 8.70 times its own mass.

Summary Statement
My project is about trying to find the attraction ratio of a magnet to a metal rod; using this ratio I could predict whether or not a magnet will attract the rod.

Help Received
My science teacher lent me the mass scale