



CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY

<b>Name(s)</b> Kyle E. Worcester-Moore	<b>Project Number</b>  34062
<b>Project Title</b> Is Magnetism Conserved?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> For my project, I wanted to see if magnets are able to magnetize certain other objects without any effect on their own strength. I wanted to test this because I thought this might mean magnets do not follow the law of conservation of energy. I hypothesized that magnets are able to magnetize other objects without depleting their own strength.</p> <p><b>Methods/Materials</b> My test used a magnetometer, several screws and several neodymium magnets. By measuring the magnetic strength of the objects before and after magnetizing the screw with the neodymium magnets, I was able to determine change in strength of the magnet, and the strength of the newly made magnet (screw).</p> <p><b>Results</b> My results showed no noticeable change in the magnetic strength of the neodymium magnets, and a noticeable but varying change in the magnetic strength of the screws.</p> <p><b>Conclusions/Discussion</b> The major issue with my experiment was the limited accuracy of the magnetometer used. My results show that my hypothesis was correct, magnets are able to magnetize other objects without depleting their own magnetic force. Although these results seem to violate the law of conservation of energy, given that magnetism is not a type of energy, this experiment does not break the law of conservation of energy.</p>	
<b>Summary Statement</b> Do magnets retain their magnetic strength after they are used to magnetize another object?	
<b>Help Received</b> Father helped record data while I performed the experiment; Used magnetometer at CSUMB physics classroom.	