



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> Brandon Phan	<b>Project Number</b>  31182
<b>Project Title</b> Magnetic Levitation	
<b>Abstract</b> <b>Objectives/Goals</b> My project was on magnets and whether a hot magnet, cold magnet, or room temperature magnet would be stronger. My hypothesis was that a hot magnet would be stronger than a cold magnet. <b>Methods/Materials</b> I had to test the magnets so i build a train and track made of magnets, like a mini model of a Mag Lev train. I went through attempts and fails to make my platform on the track. In the end i used a piece of metal that allowed the platform to go up and down in order for me to test it. I used a .5, 1, 1.5, 2, and 2.5kg and recorded how many centimeters the platform and got my results. Then i heated it with a gel pack to 62c and tested the same way. Lastly I put the whole model in the freezer and got it to 2c and then tested it. <b>Results</b> Sometimes the hot magnets were stronger than the cold magnets but over by a huge difference the cold magnets were stronger than the hot magnets and room temperature magnets. The room temperature was the weakest overall. <b>Conclusions/Discussion</b> My conclusion is that cold magnets are stronger than hot and cold magnets.	
<b>Summary Statement</b> My project was to see which was stronger; a hot magnet, a cold magnet or a room temperature magnet.	
<b>Help Received</b> none	