



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Morris Sarafian	Project Number S1916
Project Title Tricky Curie	
Objectives/Goals A magnet's magnetic field is affected by a change in temperature. My hypothesis for this project was that the magnet with the lowest Curie point would be affected by temperature the greatest. For this project, I used neodymium, samarium-cobalt, and alnico magnets, different size beakers, dry ice, ice, BBs, and boiling water to test my hypothesis.	
Abstract Methods/Materials Materials: 3 Neodymium magnets; 3 Samarium-cobalt magnets; 3 Alnico magnets; Beakers(2 200 mL beakers, 2 100 mL beakers, 1 400 mL beakers); Thermometer ; BBs; Dry ice; Ice; Boiling water. Procedures: 1. Obtained neodymium magnets 2. Put them in a beaker 3. Put dry ice in a large beaker and put the beaker of magnets into the dry ice beaker 4. Kept magnet beaker in the larger beaker until the magnets have reached -79 0 C 5. Took out magnets and put them into beaker full of BBs 6. Counted number of BBs attracted by each magnet 7. Repeated process for ice, boiling water, and room temperature. 8. Kept set of magnets at room temperature 9. Put the magnets into a beaker full of BBs (control) 10. Averaged the data 11. Repeated process for samarium-cobalt and alnico magnets 12. Averaged Data 13. Graphed Data 14. Analyzed Data 15. Found type of magnet that is affected by temperature the greatest.	
Results For this project, I tested the three different magnet types at four different temperatures. After doing the tests, the results showed that the magnet with the lowest Curie point was affected the greatest by the temperature changes. The magnet with the lowest Curie point was the neodymium magnet out of the three magnets tested.	
Conclusions/Discussion	
Summary Statement My project was to determine which magnet type would be affected the greatest by the temperature changes.	
Help Received Some of the equipment was supplied by the school	