



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Kelsey M. DeVries	Project Number J0709
Project Title Electromagnets and How They Work	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I wanted to see the relationship between voltage, resistance, and the force created in an electromagnet.</p> <p>Methods/Materials I constructed two electromagnets of varying wire size. I varied the voltage between three and six volts. With varied voltage I measured how many paperclips each electromagnet would lift.</p> <p>Results I found a direct relationship between higher voltage applied and the amount of weight an electromagnet could lift. I also found that as resistance increased for the repective voltages, the strength of the magnetic field decreased.</p> <p>Conclusions/Discussion Increasing voltage increases the strength of a magnetic field, but resistance in varying wire size can increase or reduce that same magnetic field.</p>	
Summary Statement I am studying the relationship between varying voltage and resistance in electromagnetic field strength.	
Help Received	