



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Nicholas Denny; Jacob Zivonovich	Project Number J0905
Project Title Amazing Electric Currents	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment is to find out which conductor works best with a rheostat dimmer, or more commonly known, a potentiometer. Scientific Question: What conductor works to light up a light bulb best? Hypothesis Nicks:I think that copper wire work best in this experiment Jacobs:I think that the silver cup will be the best conductor because it has the biggest size of all of the other variables and probably the most power.</p> <p>Methods/Materials Material list: Pencil, 6 volt battery, 2.4 volt bulb, 6 feet of insulated copper wire 2 paper clips, 2 tacks, 8 nails, 1 black board, Duck Tape, 2 1x6 pieces of wood 1 shoe box, Gold Ring, Silver Cup, Nickel 10 copper Wire Method Part 1: 1.Straighten out two paper clips and at one end of each, form a loop somewhat smaller than the diameter of the bulbs base2.At the other end of each paper clip, make a tiny loop that will go around the pin of the thumbtack.3.Cut two 1 foot (30 cm) sections from the 6 feet (2m) of copper wire and scrape 2 inches (5cm) of insulation from the ends of these sections.4.Wrap four turns of the leaned off ends of one of these wires around the scraped thumbtack. Press this thumbtack into the center of the piece of wood. 5.Arrange the two paperclips so that both large loops are exactly above the scraped thumbtack in the middle. 6.Around one of these tacks, wrap the cleaned off end of the other wire too make contact with the thumbtack, and in turn, the paperclip.7.Place the bulb into the turned up loops of the paperclips at the center of the wood. Part 2: 1.Split the pencil so that you expose the graphite interior.2. Attach the pencil to the second piece of wood.3.Cut the remaining four feet of copper wire into three equal sections. Strip the insulation from the ends of all pieces. 4.Attach a copper wire to the battery's other terminal. Then attach the other end of the wire to the graphite. 5.Move the unattached piece of wire along the length of the graphite to complete the circuit.6.Use the radiometer and box to record the number of seconds per revolution.7.Continue steps 4-6 using the other variables: gold, copper, salt, volcanic rock, silver and nickel.</p> <p>Results Silver produced the fastest Revolutions per seconds.It was shortly followed by the coin,followed by the Copper,and last came gold.</p> <p>Conclusions/Discussion The silver cup came in first which was followed by the coin, then the copper, and in last place was gold.</p>	
Summary Statement My project is about Electric Currents, and how diffrent conductors effect the radiometer.	
Help Received Stephen Denny and Peter Zivonovich for cutting the boards	