



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Max Terry	<b>Project Number</b> <b>J0723</b>
<b>Project Title</b> AA Alkaline Batteries: Capacity Testing	
<b>Objectives/Goals</b> My objective was to find out which brand of AA alkaline batteries lasts the longest under a fixed load. My hypothesis was that the Energizer Advanced Formula brand would last the longest because their commercials always say they do.	
<b>Abstract</b>	
<b>Methods/Materials</b> I created a test circuit which included a battery holder, a precision resistor, and an on/off switch. I repeated the circuit 18 times. My procedures were: I measured each battery every half an hour for two hours. Then turned off all the switches and repeated the same process 24 hours later. I did this for seven days. Lastly, I graphed the data.	
<b>Results</b> 13 out of 17 brands performed about the same. The other 4 did poorly. Of the 4 that did not do well, two of the brands were "heavy duty" batteries.	
<b>Conclusions/Discussion</b> <ul style="list-style-type: none"><li>- My data did not support my hypothesis. The Energizer Advanced Formula brand battery preformed only average (about the same as most of the other brands).</li><li>- One of the cheapest batteries, the Safeway Select brand, did as well of the Energizer Advanced Formula.</li><li>- There is no relation in how well the batteries did and their price.</li></ul>	
<b>Summary Statement</b> It is about AA battery life spans.	
<b>Help Received</b> My dad helped guide me to build my circuits.	