



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

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| <b>Name(s)</b><br>Nicole L. Corlett   | <b>Project Number</b><br><b>J0706</b> |
| <b>Project Title</b><br><b>How Does the Intensity of Light Affect Output of Solar Cells?</b>  |                                       |
| <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b><br/>The objective of this experiment is to determine if changes in intensity of light affect the output of solar cells.</p> <p><b>Methods/Materials</b><br/>I used: a single solar cell, a volt meter, an LED(light emitting diode),a switch, a reflector light socket, and 5 light bulbs(15 watts, 40 watts, 60 watts, 75 watts, and 100 watts). I wired the volt meter and the LED together. Those were then wired to a solar cell. A light bulb was then placed in a reflector lamp and shone on the solar cell. From there I measured volts and tried but could not succeed in measuring amps.</p> <p><b>Results</b><br/>With the greater intensity of light, the LED was brighter and voltage was higher. With the lower intensity, the LED was less bright than before and voltage was low. Some of the voltages ranged from 0.00 volts to 9.00 volts.</p> <p><b>Conclusions/Discussion</b><br/>From my experiment, you can conclude that as the intensity of light gets higher, the voltage also gets higher. My experiment shows that the output voltage of the solar cells is related to the intensity of the light source. Based on this, the best location to position a solar cell would be where it gets the highest intensity of light.</p> |                                       |
| <b>Summary Statement</b><br>My project is to determine how the intensity of light affects the output of solar cells.  |                                       |
| <b>Help Received</b><br>Father helped wire board and taught me how to solder and use a drill press. Dale Ritter gave suggestions on components to use.  |                                       |