



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Lamby C. Kreeger	Project Number J1020
Project Title Solar Cells: Will They Sprout in the New Green Economy?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals As global warming concerns grow, a source of power which does not add to global warming becomes more and more important. Solar power is an obvious candidate to replace things such as coal and gas for creating electricity. However, it must make economic sense before solar power can replace existing sources of power. I investigated exactly how important the amount of sunlight was to a solar cell's ability to produce electricity. If a little less sunlight results in only a little less electricity being created, then the solar cell might be economical under less than perfect conditions. If I was to take away a little amount of light and a big amount of the solar cells electricity went away then the solar cell would not be economical or practical. For my project I tested solar cells with different light intensities and recorded the amount of electricity that the solar cells gave off.</p> <p>Methods/Materials To do this I built a box that I placed the light bulb and the solar cell in. Using different size bulbs, I would measure the amount of electricity the solar cell gave for a given light intensity. I measured the light intensity of each bulb with a light meter.</p> <p>Results I found that as the light intensity went down, the amount of electricity produced by the solar cells went down by about the same percentage. This was very clear because the graph of light intensity vs. solar cell output was linear.</p> <p>Conclusions/Discussion This means you may be able to place a solar plant at a place that is cheaper or easier to build at but has less light than a more expensive place. I believe that solar power is great for the environment and the economy and people should start using it more to get one step closer to a healthier planet.</p>	
Summary Statement I investigated the efficiency of solar cells relative to the amount of light they receive in order to determine if solar energy can be economically feasible in places with less sunlight.	
Help Received My dad helped me build and put together the box and he helped me with soldering the solar cells to the wires. He also helped me with the wording of some of my papers for the display board. My mom took pictures of me doing the project for me to put on my board.	