



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Bryon E. Scott	Project Number J1032
Project Title Sun Power	
Abstract Objectives/Goals My goal was to determine if the angle a solar cell is mounted at would affect the amount of energy the cell would produce. Methods/Materials Materials: multimeter, solar cells, protractor, velcro, screws, screw driver, metal brackets, vise, hammer, jumper wires with alligator clips, wood, compass, data chart. Methods: A solar cell was mounted on each of four metal brackets bent to varying angles. These solar cells were placed in the sun facing South. Voltage readings were taken with a multimeter each hour. Research indicated that the most voltage or electric energy would be produced by the solar cell mounted at the latitude of my area, approximately 33 degrees. Results In 156 out of 160 readings, 97.5 percent of the time, the solar cell mounted at the angle of 30 degrees produced the most voltage or electric energy. Conclusions/Discussion The results showed that my hypothesis was correct. To get the most effecient energy production from solar cells they must be mounted at the optimal angle which is the latitude of the area. Using solar energy is important because it saves our primary natural resources and is better for our environment. Just one 100kw solar energy system can, in one year, save 18,700 pounds of carbon dioxide emissions and 420 barrels of oil. Because solar energy does not pollute the environment with carbon dioxide, sulfur dioxide or mercury like many traditional forms of electrical generation do, it does not contribute to global warming, acid rain or smog.	
Summary Statement I found the optimal angle to mount solar cells to produce the most electric energy (voltage).	
Help Received Neighbor helped bend brackets; Dad helped build test board and make graphs; Mom helped design the board layout.	