



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Oscar Aviles; Manuel Gonzalez	Project Number S0701
Project Title Photo-Voltaic Cells	
Objectives/Goals The objective of the project was to conduct research and laboratory experimentation to study photo voltaic cells and their practical applications.	
Abstract	
Methods/Materials Experiments were done to determine the following: A:Do similar PV cells produce similar electrical output? B:How does light intensity affect the electrical output of a PV cell? C:How does the angle of the PV cell to the light source affect the electrical output? D:How does the distance from the light source affect the electrical output of a PV cell? E:How does placing part of a PV cell in Shadow affect its electrical output? F:How does the color of the light affect the electrical output of a PV cell? G:How does combining PV cells in parallel affect the electrical output of the PV cells? H:How does combining PV cells in series affect the electrical output of the PV cells?	
Results a: Similar PV Cells produce almost similar electrical output. b: More the light intensity, greater the electrical power output. c: Electrical output is maximum when the light source is at right angles to the PV cell and reduces as the angle decreases. d: The power output decreases as the distance of the light source increases. e: Electrical output decreases as the area in the shadow increases. f: Since color blocks off part of the light waves, the output decreases. The reduction is least for red and the most for blue. g: In parallel, the current increases, but the voltage remains the same. h: In series, the voltage increases, but the current remains the same.	
Conclusions/Discussion Photo-voltaic cells are very important sources of future electrical energy as non-renewable sources of energy get depleted. At present they are very expensive. However, with more research, it would be possible to produce them more economically	
Summary Statement Photo-Voltaic cells are a promising source of electrical power for the future.	
Help Received Our teacher, Mr. Bindra procured the necessary test equipment and guided us in doing the project and helped us prepare the Project Report.	