



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Bridget Lerman; Lisa Osepyan	Project Number J0823
Project Title Does the Angle and Color of Wavelength Affect the Amount of Electricity Produced by a Solar Panel?	
Abstract Objectives/Goals The purpose of this experiment was to find out if the angle and the color of the wavelength affected the amount of electricity produced by a solar panel. Methods/Materials We tested the affect of the angle by placing the solar panel at 90, 100, 110, 120, 130, 140, 150, 160, 170, and 180 degrees at five minute intervals. Then we repeated the process using one minute intervals. To test the affect of color, we covered the solar panel in pink, blue, and clear cellophane. Results At five minute intervals (at average), the solar panel at a 90 angle created 35.60 mA, a 100 angle created 46.50 mA, a 110 angle created 55.30 mA, a 120 angle created 56.00, a 130 angle created 59.00 mA, a 140 angle created 51.30 mA, 150 a angle created 49.00 mA, a 160 angle created 25.8 mA, a 170 angle created 35.4 mA, and a 180 angle created 42.00 mA. At one minute intervals (at average), the solar panel at a 90 angle created 45.9 mA, a 100 angle created 53.3 mA, a 110 angle created 58.80 mA, a 120 angle created 62.5 mA, a 130 angle created 59.10 mA, a 140 angle created 57.30 mA, 1500 a angle created 51.30 mA, a 1600 angle created, a angle created 25.3 mA, a 1700 angle created 24.5 mA, and a 1800 angle created 40.4 mA. The colored cellophane test gave the following results; at 1800 pink created 31.3 mA, blue created 25.8 mA, and clear created 34.1 mA. Conclusions/Discussion From our experiments, we learned that obtuse angles of around 1100- 1300 produced the most electricity. The clear cellophane produced the greatest energy, followed by the pink cellophane, and the blue cellophane.	
Summary Statement Our project is about how to improve the solar pannel output by testing the angle and color.	
Help Received Mr. Saramosing (teacher who guided us in the scientific process)	