



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Timothy J. Okita	Project Number J1825
Project Title The Efficiency of the Fluorescent Light Bulb vs. the Incandescent Light Bulb	
Abstract Objectives/Goals The objective is to see how much more efficient the fluorescent light bulb is compared to the incandescent light bulb. Methods/Materials Three fluorescent light bulbs (10, 13 and 20 watts) and three equivalent incandescent light bulbs (40, 60 and 75 watts) were tested. The heat given off by each bulb was measured by the rise in air temperature in a closed Styrofoam container. Each bulb was tested at one-minute intervals for 15 minutes and a total of six tests on each bulb were conducted. In addition, light and wattage were measured. The light given off by each bulb was measured at four different distances using a light meter. The wattage of each bulb was measured using a watt meter. Results The fluorescent light bulbs are 75% more efficient than the equivalent incandescent light bulbs. Since the wattage measurements were consistent with the rated watts and the light output was approximately the same for each equivalent bulb, incandescent light bulbs waste energy in the form of heating the air in the room. Conclusions/Discussion The fluorescent light bulbs are more efficient than predicted. The wattage and light output was approximately the same for the two types of bulb as expected. This experiment demonstrates that there could be significant energy savings if people used fluorescent rather than incandescent light bulbs in their homes and businesses.	
Summary Statement In this experiment, I am testing how much more efficient the fluorescent light bulb is than the incandescent light bulb.	
Help Received My dad helped me record the results.	