



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Aidan F. Healy</b>	<b>Project Number</b> <b>J0815</b>
<b>Project Title</b> <b>Capturing Solar Energy</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of my project is to determine which type of reflector will make a photovoltaic solar cell gain the most solar energy. My hypothesis is: If light rays are directed from a magnifying glass, mirrors, or a parabolic reflector, the solar energy absorbed by a photovoltaic solar cell would then increase. <b>Methods/Materials</b> The experiment was performed at the same time, in the same place, on five separate days. A magnifying glass, one mirror, then two mirrors, and a parabolic reflector were reflected onto a photovoltaic solar cell to determine which reflector would cause the greatest gain on a DCamp 200mA voltage meter. <b>Results</b> The parabolic reflector generated the greatest energy gain in the photovoltaic solar cell because it was very reflective. The two mirrors generated the second highest energy gain. The one mirror showed the third highest gain. The magnifying glass showed the lowest energy gain. The magnifying glass showed less energy gain than the control because the shadow of the magnifying glass itself, blocked the sun's rays. <b>Conclusions/Discussion</b> My conclusion is that parabolic reflectors should be used whenever possible when solar cell panels are being installed. Parabolic reflectors increase the amount of energy the solar cells absorb.	
<b>Summary Statement</b> My project tests different reflectors to see which one will cause the greatest energy gain in a solar cell.	
<b>Help Received</b> My mother helped type and format my report. My dad helped me connect the solar cell to the voltage meter.	