



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Cory E. Stevenson</b>	<b>Project Number</b> <b>J0241</b>
<b>Project Title</b> <b>Light, Mirrors, Heat, and Water</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My goal for this science fair project was to test how mirrors effect the water production rates of solar distillers. <b>Methods/Materials</b> I used three solar stills, a parabolic mirror, and a flat mirror. I built both the stills and the mirrors. I placed the three stills out for 11 (24 hour) periods (aprox. 9:00pm-9:00pm) and placed the two mirrors behind two different stills. One of the stills had no mirror and was left as a control sample. I collected the data on temperatures in the afternoon (1:00pm-3:00pm) each day. I then collected the water that each still produced and recorded the data at the end of each 24 hour period. <b>Results</b> My results were that the still with the parabolic mirror produced on average 51% more distilled water than the control. The solar still with the flat mirror produced 22% more than the control, on average. <b>Conclusions/Discussion</b> I learned that mirrors do improve the water production of solar stills. Specifically the parabolic mirror helps water production more than the flat mirror and the flat mirror produced more than the control. My results supported my hypotheses that mirrors would augment the stills water production and that the parabolic mirror would increase water production the most. This experiment shows an effective way to signifcantly improve the production of drinkable water from water with sediments or contaminants.	
<b>Summary Statement</b> This project was to test how mirrors would affect the fresh water production of solar distillation systems.	
<b>Help Received</b> My father helped build stills and mirrors and helped troubleshoot my tests. My mother helped proofread my report.	