



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> <b>William C. Gaudreau</b>	<b>Project Number</b> <b>J0207</b>
<b>Project Title</b> <b>What's Cookin'?</b>	
<div><div><b>Objectives/Goals</b> The objective of my project was to find out what type solar oven will best heat water and why.</div><div><b>Methods/Materials</b> Three different common styles of solar ovens were assembled using materials anyone could find at home; 1 - Rectangular, 2 - Square, and 3 - Funnel. The solar ovens had different sizes, shapes and volumes, but used similar materials and were all lined with reflective aluminum foil or silver lining. The top of the ovens were sealed with clear plastic sheet or plastic oven bag. A bowl of water and a meat thermometer was placed in each oven and the temperature recorded every 10 minutes over an hour.</div><div><b>Results</b> The results of my experiment show the rectangular box was the most effective in heating water. In two tests the temperature increased by 30-50 degrees Fahrenheit from start to finish, to reach a peak of 115 degrees while the outside temperature was only 65 degrees.</div><div><b>Conclusions/Discussion</b> I believe the most effective solar oven was the rectangular box because it had the smallest volume and could heat the inside air and water to a higher temperature. My hypothesis before completing the experiment was not correct. I thought the funnel would heat the water to a higher temperature because it would reflect the sun rays toward the water and build heat faster. I was surprised the rectangular box did the best because the other two ovens were larger and had more reflective sides.</div></div>	
<b>Summary Statement</b> A solar oven's shape and volume will affect how well it can heat water.	
<b>Help Received</b> My dad helped figure out how to build the boxes and cutting cardboard, mother reviewed my written summaries.	