



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Zachary S. Bobbitt	Project Number J0205
Project Title Too Hot to Handle!	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Which of the three solar ovens that I am going to build, the Windshield Shade Solar Funnel Oven, the Pizza Box Solar Oven or the Double-Angle-Twelve-Sided Solar Oven (D.A.T.S.) will heat the water to the highest temperature?</p> <p>Methods/Materials</p> <ol style="list-style-type: none">1. Set-up all three solar ovens2. Focus the solar ovens facing towards sun.3. Fill four, 3-cup clear containers with 500ml. of water.4. Place a thermometer into each container of water, and record the temperature of the water.5. Place one container inside each solar oven6. Place the last container in the sun for a control.7. Check and record the temperature of water every thirty minutes. Repeat step 12 six times or until it has been 150minutes. <p>Results The data indicated that the Double-Angle-Twelve-Sided Solar Oven heated the water faster than the other ovens.</p> <p>Conclusions/Discussion Based on the data from my experiments, my hypothesis has basically been proven correct. The Double-Angled-Twelve-Sided Solar Oven (D.A.T.S.) heated the water to hottest temperature in degrees Fahrenheit in all but one experiment. The experiments also seem to show that the reason behind my hypothesis was correct. The Windshield Shade Solar Funnel Oven, which did not reflect the sun's rays from as many different directions as the Double-Angled-Twelve-Sided Solar Oven (D.A.T.S.), was the second best at heating the water. Since it had only one reflective surface to focus the sun's rays, the Pizza Box Solar Oven heated the water to the lowest temperature in each experiment. It was interesting to note that both the Double-Angled-Twelve-Sided Oven (D.A.T.S.) and the Windshield Shade Solar Funnel Oven still heated the water substantially on overcast days, while the Pizza Oven did not heat well on those days. Further the Windshield Shade Solar Funnel did not do as well on windy days, because its heating surfaces were not stable in the wind.</p>	
Summary Statement I tested 3 types of solar ovens.	
Help Received Mother helped arrange my board and supervised cutting/building the D.A.T.S. oven. Mr. Smith, my science teacher reviewed my project.	