



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

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Project Title The Perfect Solar Oven	
Abstract Objectives/Goals This project tests three solar oven reflector designs to see which collects sunlight most efficiently. The three designs tested were the rounded panel, the four-panel and the simple parabolic. Methods/Materials These ovens were tested in various sunlight conditions for both how fast they heated and maximum temperature. All of these ovens were made of cardboard with tin foil covering them to make the panels. The insulation was the insulation from our house. Results Overall, a simple parabolic design proved to be the best, reaching a temperature of much higher than 200 degrees F, with the four-panel cooker close behind. The rounded panel oven was the slowest to gain temperature and the oven with the least overall heat gain. In the final experiment it was about 40 degrees F behind the two other oven designs. Conclusions/Discussion In conclusion, the optimal type of solar oven seems to be the simple parabolic, which greatly out-jumped the other two in energy collection and maximum temperature.	
Summary Statement Three basic solar oven designs were tested to see which collected and maintained heat most efficiently and which one reached the highest temperature.	
Help Received My father helped me in building the ovens, data collection, and assembling the poster.	