



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Thomas A. Wood	Project Number J0227
Project Title Concrete on Fire: The Effects of High Heat Temperatures on Concrete	
Abstract Objectives/Goals The objective is to determine if the less time concrete has to cure and the longer it is exposed to heat of varying temperatures, the more the concrete will crack and crumble. Methods/Materials Ready mix concrete, paper cups for molds and stirring sticks. 36 paper cups of concrete were mixed and molded. The first batch of 12 cured for 10 days. The second batch cured for 7 days and the last batch of 12 cured for 3 days. All samples were placed in an oven with a starting temperature of 350' and an ending temperature of 550'. The samples were checked for any changes daily. Results The concrete samples with less cure time that were exposed to higher temperatures cracked and crumbled the most. Conclusions/Discussion My conclusion is that concrete that is allowed to cure or dry for longer periods of time will consistently be more stable when exposed to varying temperatures.	
Summary Statement Finding out if cure time and high heat effects the stability of concrete for purposes of building foundations	
Help Received Mother helped with board layout, Father with samples, typing and hot oven, Sister with layout	