



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Nicolas A. O'Connor	Project Number J1029
Project Title The Effect of Fire on Chaparral Seed Germination	
Abstract Objectives/Goals The objective of my project was to observe fire's effect on the germination of plant seeds from chaparral and riparian habitats. I hypothesized that burned chaparral seeds germinate better than unburned chaparral seeds and that unburned riparian seeds would germinate better than burned riparian seeds. Methods/Materials Eight plant species' seeds were obtained. Four of the species were from chaparral habitats and four of the species were from riparian habitats. Half of the seeds of each species were exposed to fire and the other half were not. Results Two of my burned chaparral species had significant germination (over two seeds germinated). For these chaparral species, germination rates were much higher for burned seeds than for unburned seeds. The ratios for burned to unburned seed germination were 6.9:1 and 1.6:1 for these species. Only one riparian species had significant germination, but unlike the chaparral species studied, this species had more unburned seeds germinate than burned seeds (unburned:burned = 37.5:1). Conclusions/Discussion Based on the species that showed significant germination, I concluded that fire helps some chaparral seeds germinate and negatively affects germination of some riparian seeds. This information supports my hypothesis. Another observation was that the onset of germination (the number of days from planting to germination) came faster for burned chaparral seeds than for unburned chaparral seeds.	
Summary Statement My project is about the effect of fire on the germination of chaparral and riparian seeds.	
Help Received Soil Ecology Restoration Group of SD State Univ. provided seed. Parents helped with the experiment.	