



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jake P. Pellegrini</b>	<b>Project Number</b> <b>J1429</b>
<b>Project Title</b> <b>How Does Cigarette Smoke Affect Crickets?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective is to determine if different amounts of nicotine in cigarettes have an effect on crickets' chirping. I believe the cigarettes with the greatest amount of nicotine will cause the greatest increase in chirping because nicotine is a stimulant. <b>Methods/Materials</b> I prepared four containers holding one female and four male crickets in each container. Each group of crickets was exposed to unfiltered, filtered, or ultralight cigarette smoke (using a milk jug smoke machine) for one minute. A control group was not exposed to smoke. Cricket chirps were recorded for one minute before and after exposure to smoke. Four tests were conducted on consecutive days. <b>Results</b> Crickets exposed to the most nicotine (unfiltered cigarette smoke) increased their chirping the most (by 64% on average), while crickets exposed to less nicotine (filtered cigarettes) increased chirping by 45% on average. Crickets exposed to the least amount of nicotine (ultralight cigarettes) increased 28% on average, while the control crickets did not change their chirping amount. <b>Conclusions/Discussion</b> My conclusion is that the more nicotine contained in a cigarette, the greater the affect on crickets' chirping because nicotine stimulates the crickets.	
<b>Summary Statement</b> My project is to examine the effect of different levels of nicotine on crickets' chirping.	
<b>Help Received</b> Mom lit the cigarettes and typed abstract; Used smoke machine from OLQA Science teacher, Mrs. Westhart; Dad took me to get crickets.	