



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Krystal M. Watkins</b>	<b>Project Number</b> <b>J1134</b>
<b>Project Title</b> <b>Which Smoke Detector Will Work Best to Alert You to the Possibility of a Fire?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to determine if a more expensive smoke detector would alert you to a possible fire faster than a less expensive smoke detector. <b>Methods/Materials</b> Materials:I used three different priced smoke detectors. Three 2ftx3ft covered boxes were used. 1 fog machine and 1 bottle of fog maker. 1 stopwatch. 3 9 volt batteries. 1 piece of PVC, 2" diameter by 19" long. I attached a different smoke detector to each box, and then labeled them accordingly, box 1, 2, and 3.An adult helped me with the fog machine and I waited for the alarm to go off and wrote the time down. I repeated the same steps 3 times on each box. <b>Results</b> The medium priced smoke detector faster to alert you to a fire by 00:07.16 seconds. I thought that the higher priced smoke detector would work faster so my prediction was wrong. <b>Conclusions/Discussion</b> After testing all 3 smoke detectors 3 different times I averaged the results from each one and found that the medium priced or #2 smoke detector worked better than the more expensive one by 00:07.16 seconds. Although 00:07.16 seconds does not sound like a lot of time, it would be enough time to dial 911. Enough time to yell and get someone up and out of danger. Basically 00:07.16 is enough time to save a life.	
<b>Summary Statement</b> My project is about which smoke detector could save your life.	
<b>Help Received</b> Two Sonora City Firepersons helped me with web sites and one let me borrow his fog machine. My grandfather helped me with the fog machine. My grandmother took pictures.	