



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Kylynn M. Leffingwell	<b>Project Number</b> <b>J0722</b>
<b>Project Title</b> <b>What Level of Visual Distortion Weakens the Stroop Effect?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To determine when the brain stops confusing the character(words) with the color.</p> <p><b>Methods/Materials</b> I took the original stroop effect and began to distort the words into varying degrees. Level 1 was the control. No distortion at all. Level 2 the words were slightly distorted level 3 the words were more distorted level 4 the words were barely recognizable</p> <p>I showed the four levels to second, fourth, and sixth graders. I timed how long it took to complete each level. I tested 75 children all together (25 in each grade)</p> <p><b>Results</b> Each level became easier to complete as the testing went along. It appeared as though level 3 is when the brain started to just see color rather than the words.</p> <p>Grade levels - 6th grade was the fastest in completing the testing 4th was in the middle 2nd was the slowest (as was expected)</p> <p>Boys and girls - boys had faster times than girls</p> <p><b>Conclusions/Discussion</b> All of my hypotheses were correct</p> <p>Using this test can help scientist determine how the brain works. Could this test be more useful in testing children with visual problems? This might be helpful in determining how to help these children.</p>	
<b>Summary Statement</b> Determining when the brain will recognize color rather than words when using the stroop effect.	
<b>Help Received</b> teacher helped with scientific process, parents helped put board together	