



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

|   |                                       |
|---|---------------------------------------|
| <b>Name(s)</b><br><b>Zachary M. Kysar</b>   | <b>Project Number</b><br><b>J0615</b> |
| <b>Project Title</b><br><b>Are You Smarter Than a Kindergartner? The Stroop Effect Revisited</b>  |                                       |
| <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b><br/>The objective of this project was to test if one's ability to read would interfere with their capability to differentiate between the written word and the color of that word. The experiment tested the Stroop effect on readers and non-readers and hypothesized that non-readers would show limited interference from the written word.</p> <p><b>Methods/Materials</b><br/>Subjects were 8th graders, 7th graders, 1st graders, and kindergarteners. All the subjects were shown two different posters: one with color names written in the same color ink as the name of the written color, and the other written in different color ink from the written color names. Subjects were asked to say the color ink that the color names were written in and not to read the written word. Each subject was timed at the completion of each poster.</p> <p><b>Results</b><br/>The data from the 8th graders and the 7th graders supported the Stroop effect. There was interference in processing demonstrated between posters. The results also supported the hypothesis that non-readers would show little interference between the processing of the color ink and the written color word.</p> <p><b>Conclusions/Discussion</b><br/>Even the slightest reading capabilities caused interference from the written words. Some of the 1st graders showed an ability to read some of the color words. This caused an interference effect similar to the 7th and 8th graders. When the 1st graders were removed from the non-reader group, the difference in response times between the kindergarteners and the 7th and 8th graders greatly increased, which further supported the experiment's hypothesis.</p> |                                       |
| <b>Summary Statement</b><br>This project examined whether the ability to read would interfere with the processing of colors.  |                                       |
| <b>Help Received</b><br>Mother helped edit my paper.  |                                       |