



# CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

<b>Name(s)</b> <b>Jonah S. Kaye</b>	<b>Project Number</b> <b>S0419</b>
<b>Project Title</b> <b>Read All About It: Does Reading from a Printed Page vs. a Digital Screen Affect Reading Comprehension?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> I love to curl up with a good book. These days, however, many people would rather curl up with their electronic reading devices. Since such devices are replacing books in many academic settings, I wondered if there was any difference in reading comprehension between reading from a book and reading from a digital screen. As the basic brain pathways for interpreting written language seem constant, my hypothesis was that there would be no difference in reading comprehension between reading from a printed page versus a digital screen. <b>Methods/Materials</b> I selected two short readings from ACT practice tests, both prose fiction of similar length and difficulty. One passage described a woman experiencing Mexican art, while the other passage described a football team's final game. Each passage had a corresponding test of 10 multiple-choice questions assessing the reader's comprehension. I recruited 66 high school students, 33 male and 33 female, ages 14-17. Each student first read one of the two passages from a printed page, and took the corresponding multiple-choice test without referring to the printed passage. Next, the same subject read the other passage on a computer screen, and took the corresponding multiple-choice test without referring to the computer screen passage. Subjects were randomly assigned to which passage they read first and, with no time limit, each reading was timed. <b>Results</b> On average, the subjects scored statistically the same on both the printed and digital tests. The printed test scores averaged 6.83 out of 10 correct answers, while the digital test scores averaged 6.85 out of 10 correct answers. <b>Conclusions/Discussion</b> The overall data proved my hypothesis, that reading comprehension stays constant, whether reading from the printed page or from the digital screen. Of course, more subjects would have made this data even more statistically reliable. A 0.9 difference in the average overall scores of the two tests may have affected the data's reliability; however, subjects did spend on average 18 seconds more reading the higher-scored passage. In any case, it appears that whether curling up with a book or an electronic reading device, a reader's comprehension will not be affected.	
<b>Summary Statement</b> Does reading from a printed page versus a digital screen affect reading comprehension?	
<b>Help Received</b> My science teacher, Dr. Heather Mellows, allowed me to conduct my experiment in her classroom, and provided me with a set of laptop computers.	