



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jonah S. Kaye</b>	<b>Project Number</b> <b>J0615</b>
<b>Project Title</b> <b>Try to Remember: Do Left-Handed or Right-Handed People Have Better Short-Term Memory?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> I am left-handed, and I have always been interested in the differences between right- and left-handed people. Since left- and right-handed people use different sides of the brain more dominantly, I wondered whether short-term memory was affected by dominant handedness. My hypothesis was that right-handed people would have more extensive short-term memory than left-handed people. I reached this conclusion because the left side of the brain, the dominant side of right-handed people, is responsible for activities suitable for memorizing, such as language and patterns. The right side of the brain, the dominant side of left-handed people, is responsible for activities not necessarily associated with memory, such as creativity and philosophy.</p> <p><b>Methods/Materials</b> I recruited 7 right- and 7 left-handed subjects, ages 11 - 14. I constructed 3 lists of computer-generated random numbers from 1 to 12 digits, and put the numbers on index cards. Using a stopwatch, I gave each subject 10 seconds to look at a specific card, then the card was covered, and the subject was given the next 10 seconds to record that number on an answer sheet. The cards were shown to the subject in sequential order, and this procedure was repeated for two more trials. Each individual trial was given a score that corresponded to the last set of digits the subject had answered correctly. The final score for each subject was the average of all 3 trials. I then averaged the results of all the right- and left-handed subjects.</p> <p><b>Results</b> The overall results showed that right-handed subjects scored higher than left-handed subjects. In fact, right-handed subjects, on average, could memorize almost one more entire line of digits than left-handed subjects.</p> <p><b>Conclusions/Discussion</b> The overall data proved my hypothesis that right-handed subjects have better short-term memory than left-handed subjects. For reliable results, I limited the age range of subjects and used the same number of left- and right-handed participants. Of course, a larger sample size would make the data more accurate. In addition, to minimize potential errors, I recruited subjects from similar educational backgrounds, used a stopwatch for timing, flipped the index cards consistently, and conducted the experiment each time in the same quiet environment. In any case, it seems that right-handed people have an advantage over left-handed people when it comes to short-term memory.</p>	
<b>Summary Statement</b> Do left-handed or right-handed people have better short-term memory?	
<b>Help Received</b> My mother and father helped type and proofread the written parts of my exhibit.	