



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> Amber J. White	<b>Project Number</b> <b>J0635</b>
<b>Project Title</b> <b>Can the Brain Translate Misspelled Words?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of my project is to determine if the brain can see a misspelled word and translate it to what it was intended to say. <b>Methods/Materials</b> Over a period of several weeks, I tested 80 human test subjects. I chose to test 20 elementary school students, 20 middle school students, 20 high school students and 20 adults. By doing this, I was sure to get a large range of reading experience among the test subjects. I supplied each test subject with typed paragraphs that I made up. Most of the words were spelled incorrectly. The first and last letter of each word stayed in the same place but all the letters in the middle were randomly scrambled. I had a copy of the same paragraphs, but all of the words on my paper were spelled correctly. I then asked the subjects to read their paragraphs out loud to me. As they read aloud, I was marking which words they got wrong, which words they struggled with, and which words they read correctly. On their paper, I recorded their age and gender as well as the amount of words they read correctly. Finally, I gathered the results from each of the subjects, and then charted their results according to age group and gender. <b>Results</b> Out of all 80 test subjects, high school students and adults had the highest average reading scores. They were able to read an average of 132.9 words correctly out of the 137 words in the paragraphs. Elementary school students were able to read and translate an average of 125 of the 137 words. They did well for being young test subjects. <b>Conclusions/Discussion</b> According to the results of my experiment, I believe I have proven my hypothesis correct. The brain can translate the misspelled words it sees and interpret it to say what it was supposed to say. The older test subjects did better than the younger ones because they have seen and stored the correct word in the memory for a longer period of time	
<b>Summary Statement</b> My project shows that the brain can see a misspelled word and translate it to what it was meant to say.	
<b>Help Received</b> My mom helped organize my research, and helped edit the report. She also helped layout the board.	