



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Lul H. Tesfai</b>	<b>Project Number</b> <b>S0320</b>
<b>Project Title</b> <b>Pictorial Devices and Their Ability to Mnemonically Enhance the Human Memory</b>	
<b>Objectives/Goals</b> My objective is to determine if the use of pictorial devices are effective in mnemonically enhancing the short-term and long-term human memory. Through my experimentation I hope to test the impact mnemonic devices actually have on the human brain and whether they significantly improve memory over an extended period of time.	
<b>Abstract</b> <b>Methods/Materials</b> Informed consent was obtained from 200 randomly selected people, 100 women and 100 men ranging from age 14 to 18 years. I constructed my controlled variable, which consisted of two sets of 15 cards, with one displaying the Geez text and a and one with simply the Geez text, and a set of 30 cards containing the original 15 cards and 15 other cards displaying the Geez text. The male and female subjects were divided into groups of two depending on gender and then then divided into Group 1, which was tested with the picture and the text, and Group 2, which was tested with simply the text. The participants were first shown either the first section of cards or the second and then the assortment of thirty cards and asked to respond "yes" if they believed that the card they viewed was in the original section or "no" if believed the card was not. After counting the number of "yes" and "no" responses and the number of correct and incorrect answers, I proceed to interpret the data.	
<b>Results</b> Group 1 males and females remembered substantially more than Group 2 males and females. Group 1 females were able to retain 43% of the information, and Group 1 males were able to retain 46%, while Group 2 females were able to recall 33% and Group 2 males were able to recall 30%.	
<b>Conclusions/Discussion</b> Due to the fact that Group 1 viewed an image along with a text, they were able to visualize and comprehend the figure they viewed. In these teenagers tested, pictorial devices were effective in mnemonically enhancing the short-term memory. Despite the fact that the text the participants viewed was in another language, which they had never seen, the participants did surprisingly well. Group 1 seemed to make ties between the picture and the text, making it easier to identify the text the second time they saw it, where as Group 2 focused on the first couple letters of the text, making it difficult to identify the correct texts.	
<b>Summary Statement</b> My project tests the effectiveness of pictorial devices in mnemonically enhancing the short-term and long-term human memory.	
<b>Help Received</b> Father helped in organizing the Geez font; Mother helped in translating Geez font; Mr. Peck supervised the project; Mr. Levy provided for the essential information pertaining to the school, county, and state level science fair	