Name(s)	Project Number
Zara A. Shariff	
	34299

Project Title
How the Eye Views and Reads Words

Abstract

Objectives/Goals

The purpose of my project is to determine how the eye reads words. Does the eye read a full word or does it read individual letters? I hypothesized that the brain concentrated on the letters and read words based on memory.

Methods/Materials

I first asked ten human subjects (five boys and five girls) to read two written passages, each passage being 150 words. The first passage had correctly spelled words and the second passage consisted of words of that were transpositioned (the middle letters of the word are jumbled, but the first and last letters remained in the same place). I recorded the amount of time it took the subjects to read each passage and made an average of that to identify the time for the actual experiment. For the actual experiment, I asked 20 subjects (ten girls and ten boys) to read the same two passages. I recorded the following elements: the time it took the subjects to read each passage, the number of errors, the words that were misread and their parts of speech.

Results

After collecting all the data, I calculated the averages of the time, the number of errors, and the specific type of words. The average time (seconds) it took the girls to read the read the first passage was 46, and boys took an average of 47.8 to read the first passage. The total average time for the first passage was 46.9. For the second passage, the girls took an average of 56.3, while the boys average was 57.8. The total average for the second passage was 57.05. The number of errors for both genders was 5.2 words. The average number of errors for the first passage was 0.75, and 1.65 for the second passage.

Conclusions/Discussion

By finishing the experiment, I was able to find out if the eye reads full words or individual letters. I knew that if the eye read individual letters, the subjects would have taken a longer time to read the second passage and they would have got many more words wrong. Another important reason why I concluded that the eye reads the full word is because many people had gotten the word raced and locked wrong in the transpositioned passage. This must mean that those two transpositioned words can create more than one word, such as cared (for raced) and clocked (for locked).

Summary Statement
Does the eye read the full word or does it read individual letters?

Help Received
Sister helped proofread, Family friend helped proofread.