CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
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Project Number
31740

Project Title
Mind Your Distractions

Abstract

Objectives/Goals
I found the topic of distractions interesting as well as very current and relevant to today's society. Today's youth are grasping the technological wave by vigilantly checking Facebook, texting friends and playing game systems, often at the same time they are trying to complete homework and study for tests. So, my goal was to test the theory by examining how varying levels of distractions affect a student's ability to complete math problems and memorize items timely and accurately.

Methods/Materials
Thinking Test - In a quiet controlled environment, I tested 12 subjects ability to timely and accurately complete a 100 problem math worksheet measuring speed and accuracy. Each subject was tested 3 times with the first time having no distractions and then manipulating the level of distraction with low and high level questions while they completed the worksheets.
Memory Test - I tested 12 subjects ability to recall 10 random items in a shoebox in 1 minute measuring accuracy. Each subject was tested 3 times with the first time having no distractions and then manipulating the level of distraction with low and high level questions while they memorized the items in the shoebox.

Results
Thinking Test - My findings matched my hypothesis. On an average, the tests with low distractions caused the subjects to spend 39% more time to complete the math problems than tests given to them with no distractions and 60% more time to complete with high distractions. The average number of minutes to complete the 100 math problems was 4:20 with no distractions, 6:23 with low level distractions and 7:35 with high level distractions.
Memory Test - My results show that the existence of distractions reduced their ability to recall the items in the box. The average number of items recalled correctly was 9 with no distractions, 6 with low level of distractions and 6 with high level of distractions. With the existence of low level distractions my subjects only remembered 67% of the number of items that they had previously recalled with no distractions.

Conclusions/Discussion
In conclusion, completing homework or studying is more likely to reach maximum success without distractions. Although some people have the ability to handle the distractions, most do not and can be at a significant detriment. I believe this is a valuable lesson for students to be successful.

Summary Statement
I experimented how varying levels of distractions affect one's ability to remember and learn.

Help Received
Father administered the thinking and memory tests on me.

Preliminary