



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

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Project Title Exploring the Correlation Between Cerebral Aptitude and Varying Motivational Stimuli	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our goal in conducting this experiment was to explore possible ways to improve student test grades through psychological means. Essentially, we are aiming to determine if there are conditions that can induce confidence thereby improving scores. Our hypothesis is that telling students a test is harder will improve performance. Also, we hypothesized that telling the test was timed relatively short, that scores would improve.</p> <p>Methods/Materials In order to test our hypothesis, we devised two different tests pertaining to basic math and memory skills. The math test is 3 pages, each filled with 120 randomly distributed, simple math problems(i.e. 13-5). Each subject did as many problems as able within a 2 minute period. However the subjects were led to believe that each portion was timed differently. A similiar design was used for the memory test. We randomly generated 20 common nouns for each of three pages. For this test, subjects were given equal amounts of time for memorization of the words and for writing down those they remembered on each page. However subjects were led to believe that the pages consisted of words of varying difficulties. All time was recorded using a stopwatch and were completed in a quiet test area. The order of the pages was also randomized. Subjects were also given a survey asking for basic information such as age and gender.</p> <p>Results We found that our hypothesis is partially correct. We have determined that telling that a test is easier will improve scores. Likewise, telling that less time is given will also improve scores.</p> <p>Conclusions/Discussion Through this result, it can be concluded that if teachers want to improve test scores, they can tell students prior to the test that the test is less challenging but must be completed in a small time period. The logical explanation for this result is that an "less difficult" test instills confidence in the subject, and a "shorter" test will probably motivate more vigorous completion of the test. This method of teaching can potentially be used to improve scores on all tests, whether standardized or teacher specific.</p>	
Summary Statement This project focuses on determining the conditions in which students will be most motivated, thereby improving scores on tests and other classwork.	
Help Received Parents paid for materials	