



# CALIFORNIA STATE SCIENCE FAIR 2016 PROJECT SUMMARY

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| <b>Name(s)</b><br><b>Vibha Arramreddy; Sejal Krishnan</b>  | <b>Project Number</b><br><b>J0402</b> |
| <b>Project Title</b><br><b>Effects of Emotions on Test Takers</b>  |                                       |
| <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b><br/>In our project we wanted to figure out what would be the best emotional setting for a student to take a test. Many students know they have to memorize information and stay up late, but no one knows what is the best way to mentally prepare for a test. According to Great Schools, there is a part in the brain, the limbic system, that acts essentially as the final gate between what a person knows, and what they can recall on a test. This demonstrates the importance of a mental state when in a testing area. Therefore, if emotions affect how well a student does on a test, then the test taker feeling relaxed will ensure them a high grade.</p> <p><b>Methods/Materials</b><br/>For each emotion, the participants would do something different in our experiment. If we were testing for control, they would simply take the test without any outside influence. However, for happiness, sadness, and motivation we would show them a video that represented each emotion. Also, for scared we told them two horror stories, while making them close their eyes, to imagine themselves in a dark place. For stress, we just cut down the time limit by three minutes. Finally for relaxed, they would take deep breaths, think about the beach, and about how they had no work due. Then we made them take a test for 8 minutes, aside from stress which was for five minutes. This process was repeated for each participant for every emotion.</p> <p><b>Results</b><br/>We found that the happy tests showed the highest average, that being 89.06%. Next, we had control at 86.07%, motivational at 85.03%, stressed at 83%, sadness at 86.3%, relaxed at 83.82%, and scared at 84.82%. Our hypothesis was incorrect since the overall average was 83.82% for relaxed, but with happy it was 89.06%.</p> <p><b>Conclusions/Discussion</b><br/>Due to this experiment and our research we have concluded and confirmed two facts. First, emotions really do affect how well a student does on a test therefore showing the importance of mentally preparing for an exam. This can be shown since some averages were higher than the control and some were lower. Also, Our hypothesis was incorrect since the overall average was 83.82% for relaxed, but with happy it was 89.06%. Therefore, through our results and the fact that 89.06% was the highest average, if a student is happy and smiling there are in the best mental state possible to take a test.</p> |                                       |
| <b>Summary Statement</b><br>We found that emotions did have an effect on test takers, and that the most beneficial emotion was different for each subject.   |                                       |
| <b>Help Received</b><br>Me and my partner designed and performed the experiments by ourselves. Our science teacher, Mrs. Morgensen, provided us the room for the testing space.  |                                       |