



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2018 PROJECT SUMMARY**

<b>Name(s)</b> <b>Rhitishah Yuva Raju</b>	<b>Project Number</b>  38171
<b>Project Title</b> <b>Reducing Test Anxiety to Increase Academic Performance through Novel Breathing Techniques and Digital Visualization</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The goal of this project is to identify if high school students face test-taking anxiety and the best way to curb test-taking anxiety. <b>Methods/Materials</b> First, I identified if students have test-taking anxiety using statistical analysis through an online questionnaire comprised of 16 questions. Second, I established different experimental methods for curbing test-taking anxiety. The three different methods experimented with were: Deep Breathing, Patterned Alternate Breathing, and Digital Visualization. <b>Results</b> This study determined that a significant portion of high school students face test-taking anxiety. Overall, 41% of the 203 subjects studied had test-taking anxiety. Females at the age of 16 had the highest rate of test-taking anxiety at 67%. There were multiple countries studied. From this, USA had the greatest number of subjects facing test-taking anxiety and there was a large disparity between female and male test-taking anxiety level. However, in Malaysia, both males and females face almost the same amount of test-taking anxiety. <b>Conclusions/Discussion</b> My results have concluded that the portion of high school students facing test-taking anxiety is significant enough that it needs to be addressed in schools. The best method for curbing test-taking anxiety out of the three experimented with was Digital Visualization, however, all the three methods worked to reduce test-taking anxiety in every student. Digital Visualization was the best method because more senses are being tapped into to divert the brain from anxiety and into the relaxation exercise.	
<b>Summary Statement</b> My project identified that high school students do face test-taking anxiety and different relaxation methods can reduce their test-taking anxiety, specifically, Digital Visualization.	
<b>Help Received</b> My teachers provided a classroom environment for my experimentation.	