



# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

<b>Name(s)</b> <b>Swaraa Joshi; Inaaya Omer</b>	<b>Project Number</b> <b>J0711</b>
<b>Project Title</b> <b>The Effects of Stress on Memory and Performance</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> The goal of our project was to determine how short term stress affects memory and performance in Middle and High School students, based on their heart rate.</p> <p><b>Methods</b> 2 Pulse monitors, game Perfection with the purpose to test performance, memory tests created on a laptop, computer generated stopwatches. Split participants into two different groups (control and stress group), and asked them to answer questions or complete tasks accordingly. We conducted this experiment on both High School and Middle School students.</p> <p><b>Results</b> The effects of short term stress on Middle School and High School students' memory and performance are significantly lower under stressful conditions, with an exception of High School memory, with the results proving that stress helped these students under stressful conditions.</p> <p><b>Conclusions</b> To conclude, short - term stress does have a negative effect on memory and performance. Although, we do have some exceptions. Depending on that individual, stress may be beneficial or not helpful. Based on our experiments, the results depend on how calm an individual remains under stressful conditions.</p>	
<b>Summary Statement</b> We designed 2 experiments to test the effects of short term stress on memory and performance.	
<b>Help Received</b> We ran some ideas by our parents and our science teacher, and the students that participated in our experiment both middle school and high school made it possible to successfully conduct our study.	