



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Persephone R.J. Shelley	<b>Project Number</b> <b>J0426</b>
<b>Project Title</b> <b>Comparing Various Test Anxiety Self-Regulation Methods and the Effect on Math Fact Scores</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Do various test anxiety self-regulation methods affect math fact test scores? <b>Methods/Materials</b> Consent was obtained from fifteen elementary school individuals. Students completed a control assessment of mixed multiplication math facts over a period of three days. Students then completed the same mixed math fact assessment while being exposed to one of three variables: student chewing gum (spearmint), after completing a relaxation breathing exercise, and while holding/squeezing a handheld manipulative (homemade play dough # no color). Students completed three assessments per variable over a course of multiple days. <b>Results</b> Average results for all variables and for the control showed that students scored between 45 percent correct to 48 percent correct on the math fact assessments. The control results had an average of 48 percent correct, deep breathing averaged 48 percent correct, gum had an average of 47 percent correct, and play dough had an average of 45 percent correct. There was no significant difference between the comparable averages. <b>Conclusions/Discussion</b> Based upon comparable averages, no significant difference was shown between the average control assessment results and the average variable assessment results. While my results do not show an immediate significant difference, I surmise that if the subjects used the self-regulation method more often, it might impact their assessment results.	
<b>Summary Statement</b> This project determines if self-regulation methods can help decrease test anxiety and therefore increase math fact test scores.	
<b>Help Received</b> My coach helped me by proof reading, overseeing testing within the classroom, and helping me understand the scientific method.	