



**CALIFORNIA STATE SCIENCE FAIR  
2017 PROJECT SUMMARY**

<b>Name(s)</b> <b>Safaa F. Hussain</b>	<b>Project Number</b> <b>J0411</b>
<b>Project Title</b> <b>To Praise or Not to Praise?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this study was to determine if the impact of praise and criticism on performance change with age, specifically on adults and sixth graders. <b>Methods/Materials</b> Informed consent was obtained from 40 randomly selected participants, 20 adults and 20 sixth graders. The sample space was divided equally between males and females. An intellectual test, the game Scramble, and a physical test, running 20 meters were observed. 10 from each age group did the intellectual test, while the other half performed the physical test on a flat surface with minimal obstacles. Each participant executed one of these tests 4 times, and after the first 3 tests they were given either written praise, criticism, or verbal praise. When each participant finished all of his or her tests, they were given 3 survey questions on the effectiveness of the stimuli. <b>Results</b> I studied the scores from 40 participants of two age groups, adults and sixth graders. Seventy percent of the sixth graders performed best with verbal praise, while sixty percent of the adults performed best with criticism. The most effective stimuli remained consistent in both intellectual and physical tests for sixth graders and adults. Male and female participants varied in the type of most effective stimuli, excluding the sixth grade physical test. For the survey questions, the majority, thirty five percent, of sixth graders replied that verbal praise worked seemingly best for them, while adult majority, forty percent, replied that they perceived all forms of stimuli were equally effective. <b>Conclusions/Discussion</b> Results show that the effects of praise and criticism do change with age. However, the effects of physical versus intellectual tests did not change the most effective stimuli for each age group. With the exception of sixth grade physical test, males and females had different outcomes based on the type of stimuli.	
<b>Summary Statement</b> I found that the impact of verbal praise, criticism, and written praise does change with age, but not with the type of test or gender.	
<b>Help Received</b> I designed and performed the experiment on my own, with the exception of my science teacher giving guidance on how to display raw data in graphs.	