



CALIFORNIA STATE SCIENCE FAIR 2012 PROJECT SUMMARY

Name(s) Elizabeth P. Rose	Project Number S0424
Project Title How Does Villa Park High School Learn Best?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment was to find how the students at VPHS can learn information the best: in a visual, auditory, or kinesthetic way of learning.</p> <p>Methods/Materials I created three stimuli that test the visual, auditory, and kinesthetic memory. I had students from different classes remember three different number sequences with seven digits each. The students looked at a board with a number sequence, listened to me calling out another number sequence, and copied my hand movements that showed another number sequence. After each stimulus was given to the students, they wrote down what they could remember from their sensory memory on an answer sheet. The answer sheets were graded and I recorded how many wrong answers each student gave.</p> <p>Results A high proportion of the tests had no wrong answers. The test could have been too easy for some students, but the rest of the data had enough variability to show more interesting results. The mean number of wrong answers for the visual tests (0.911) was lower than the mean of the auditory test (1.424) and kinesthetic test (2.245). The visual learning style was proven the most effective or preferred and the kinesthetic learning style was proven the least effective. The two additional math classes strengthened the results from the first round of testing. Gender did not play a role in the test scores in either rounds of testing. There was a difference in the Freshman Seminar class test scores and the test scores of the other four classrooms tested. The Freshman Seminar auditory test had the most wrong answers whereas in the other classes the kinesthetic test had the most wrong answers.</p> <p>Conclusions/Discussion The data show that a higher number of students attending Villa Park High School were more successful with the visual learning style rather than an auditory or kinesthetic way of learning. This result was the same for all classrooms tested. The data did not show there was any difference in a learning style preference between the genders nor between honors and non-honors classrooms. This data can be applied to teacher's lesson plans and student's study strategies as well.</p>	
Summary Statement My science fair project is about how students at Villa Park High School learn best, specifically with visual, auditory, or kinesthetic learning styles.	
Help Received My uncle Elliott G. Smith, a PhD psychologist, helped me with the statistical analysis of my data by running the raw data through the SPSS (Statistical Package for Social Sciences) regression analysis and teaching me how to interpret the output of the analysis.	