



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

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<b>Project Title</b> <b>Project Innocence: Effects of Photo Lineup Method on Eyewitness Reliability</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Faulty eyewitness testimonies are the leading cause of false convictions in the United States. There are two primary photo lineup methods used by police: sequential (six photos shown one at a time) and simultaneous (all six photos shown at one time). I wanted to which method would provide better accuracy in identifying the correct suspect. Based on my research, I believed that the sequential lineup would result in more correct answers than the simultaneous lineup. I came to this conclusion because of the different ways the brain recalls information, with absolute memory being found to be more reliable than relative memory.</p> <p><b>Methods/Materials</b> I conducted my testing on 222 students in two different college classes. For each test, the suspect disrupted the class with a fake pizza delivery, staying for a minute or two. Thirty minutes later I came into the class and ran the lineup tests; the simultaneous test in the first class, and the sequential test in the second class. All participants were given consent forms, testing forms and brief instructions to choose the suspect from the lineup. The primary materials were the photo lineups I created in PowerPoint and a computer with a projector to display them to the class.</p> <p><b>Results</b> My results did not support my hypothesis. In my experiment, the simultaneous lineup produced more correct answers than the sequential lineup. The sequential lineup had an accuracy rate of 44% with 64 out of 146 test subjects correctly identifying the suspect. This is 14% less than the simultaneous lineup, which had a total of 58% or 44 out of 76 test subjects who answered correctly.</p> <p><b>Conclusions/Discussion</b> I believe these results may have been due to the fact that the subjects knew the suspect was definitely in the lineup so they used the process of elimination. By being able to directly compare the photos, they may have been able to eliminate some, leaving them only a few choices left. This may also explain the more narrow range of answers chosen in the simultaneous lineup; 92% of those test subjects chose either the correct suspect or the second most commonly picked photo. In the sequential test, the participants were comparing each photo to the one in their mind, but maybe because they only saw the subject briefly and not in a criminal act, the subject's face did not get stored into short-term memory.</p>	
<b>Summary Statement</b> I was testing to see whether the simultaneous or sequential photo lineup method would produce a higher eyewitness testimony accuracy rate.	
<b>Help Received</b> Dad acted as suspect; Mom helped with board layout; Dr.Rebekah Wanic at UCSD let me use her classroom and students as subjects.	