



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Christopher J. Paghastian</b>	<b>Project Number</b>  31292
<b>Project Title</b> <b>Einstein, IQ, and Violins</b>	
<b>Objectives/Goals</b> My objective was to determine if playing music versus not playing music prior to an IQ test affected an individual's score on it, and if so, if there was any detectable variation between various instruments. I hypothesized that playing a musical instrument would positively affect scores, and that the piano would do the best at raising IQ test scores. <b>Abstract</b> <b>Methods/Materials</b> I used two equally difficult, altered IQ tests and gave one to musicians before and one after they played music for 15 minutes. Each test was timed for 5 minutes. A control group was used to determine whether or not both IQ Tests were equivalent. Students from the Monterey Youth Orchestra and the International School of Monterey were tested in this experiment. <b>Results</b> According to my experiment, there is a slight increase in scores before and after tests, though it is not significant. The guitar had the highest difference in average scores, with a 2 point increase between each tests' average score. The guitar group's average scores for the first test were 4, and the second 6. Trumpet did the worst, with a 1 point decrease between each tests' average scores. The trumpet group's average score for the first test were 6.5, and for the second 5.5. In all, there was a 5.75 average for the 1st test, and a 5.93 average for the 2nd test, which was a 3% increase. <b>Conclusions/Discussion</b> My results contradicted my hypothesis, because the final average of the test before and after barely changed. My project also proved that those who played guitar had the highest increase in scores.	
<b>Summary Statement</b> My science fair project determined whether or not there was a short term effect of playing a musical instrument on one's IQ test score, which was proven untrue, and which instrument would do the best at raising scores, which was the guitar.	
<b>Help Received</b> Robin White helped with research ; Mother helped to read over report; Ms. Vanisha Evans Douvon helped arrange time to test the Youth Orchestra; Larry Granger conducted the Monterey Youth Orchestra between tests; Ms. Elise provided instruments for individual tests.	