



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Alexandra L. Tu	Project Number S0321
Project Title Turn Up the Music, Just Mute the Lyrics	
Abstract Objectives/Goals I wondered whether or not listening to music with lyrics or music without lyrics makes a difference when a person is performing a task. I believed that music with lyrics causes a person to make more mistakes on the job they are doing at the time because the lyrics are distracting. Methods/Materials I performed an experiment where I gave 12 test subjects ten different math tests consisting of addition, subtraction, multiplication, and division. Six of the volunteers were adults, while the other six were adolescences. They did these tests while listening to different music with lyrics and without. I chose 5 different genres of music and played each with lyrics and without. Afterwards, I graded the tests and recorded the data. Then I found the mean of the tests each person took with lyrics and without lyrics. I placed the means on a graph to have a visual comparison of each person's results. Also, I put the data into a TI-84 calculator and ran a Sample T Test so I could calculate the statistic. Results The calculation from the Sample T Test came up with $p=0.0678$, which meant my data was significant at the 10% level and that there is some evidence that tests taken while playing music with lyrics made the accuracies worse. Conclusions/Discussion In the end, the results that I collected supported my original hypothesis. Listening to music with lyrics affects the accuracy of a participant's work and makes it worse. This experiment advocates the fact that multitasking is not as efficient as many think it is. My studies show that even little things like addition and division could be done incorrectly when performing more than one task at a time.	
Summary Statement My project focused on whether or not listening to music with or without lyrics makes a difference when a person is performing a task.	
Help Received Father helped print out pictures; Statistic teacher taught me how to run Sample T Tests; Used classroom at Gabrielino High School to run tests/experiments under the supervision of Dr. J, Biology Teacher	