



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Joseph A. Taviano	Project Number J0332
Project Title Do You Hear What I Hear?	
Abstract Objectives/Goals My project is about sound and how people hear sounds. How we hear and interpret them varies from person to person. The primary focus of my project was to find out whether people with musical experience can distinguish between different musical notes better than those with no musical training. Additionally, I compared men and women, and younger and older people. Methods/Materials Materials used for this project include: tape player with cassette containing recording of 24 pairs of musical tones, response forms, answer key, piano. Procedure: 24 pairs of piano tones were recorded and played for test subjects who indicated on response form a comparison of the pairs. Response forms were graded and results charted and analyzed. Results My results were somewhat mixed compared to my stated hypothesis. In comparing results for musical and non-musical people, I found that all of the musical people scored 100 percent, concurring with my hypothesis. In comparison, the non-musical people had results ranging from 100 down to 75 percent. In the results for men and women, I found that my hypothesis was incorrect, with men averaging 93.5 percent and women averaging 76.8. Finally in considering the test results of the younger and older groups, I also found my hypothesis to be technically wrong, though the average scores only differed by .8 percent. Conclusions/Discussion It is apparent that the process of hearing and discriminating between musical notes of different pitches is very complicated. It is a safe assumption that anyone with musical training would probably score perfectly on this sort of test because the nature of their training would give them the skills to discriminate between pitches. For the other individuals tested, there are several reasons why they might not score well on this testing, ranging from physiological to environmental causes. Perhaps a deeper examination of the individuals and their results would yield more insight into the explanation of their scores.	
Summary Statement The primary focus of my project was to find out whether people with musical experience can distinguish between different musical notes better than those with no musical training.	
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