CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s) Benjamin I. Weissman	**Project Number** # J0335

Project Title
Tone Replication

Abstract

Objectives/Goals

The goal of this project is to determine whether there is a correlation between accuracy of tonal replication and various factors.

Methods/Materials

Thirty eight subjects were interviewed and tested with a tone generator. Each subject was required to fill out a questionnaire indicating various factors. Factors examined included playing an instrument, interest in singing, musical preferences, and musical experience parents.

Results

Results were consistent with some of the hypotheses. Positive correlations were found between subjects' accuracy scores and the length of time playing a musical instrument, musical experience of parents, and for some of the musical preferences.

Conclusions/Discussion

Subjects who have prior musical experience with an instrument are more likely to replicate tones accurately. Subjects who had more years playing an instrument had a greater likelihood of more accurately replicating tones. Subjects with at least one parent who played an instrument were more likely to accurately replicate tones.

Out of the top three musical preferences, subjects who preferred classical music were more able to accurately replicate tones. But there was no correlation or perhaps a negative correlation between accurate replication and liking to sing.

Early musical experience may improve one's ability to make music and to appreciate music. The results suggest that musical skills are not only inherited but can also be acquired through experience. This information can be helpful to teachers and school districts in establishing music programs.

Summary Statement

This project tested whether there is a correlation between tonal replication accuracy and musical background.

Help Received

Mother helped type the report and glue the poster board. Father helped research the project. Teacher helped with the correlations, graphs and completing other guidelines.