

# CALIFORNIA STATE SCIENCE FAIR 2006 PROJECT SUMMARY

Name(s)

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**Project Number** 

**S0303** 

## **Project Title**

# Correlation Between Perfect Pitch and Age, Gender, Ethnicity, and Musical Background

## Abstract

## Objectives/Goals

The purpose of this project is to find out what percentage of the population could sing on pitch, and if it would be dependent on the age, gender, ethnicity, or musical background of the subjects.

#### Methods/Materials

Materials: Sabine chromatic tuner, questionnaire, and 80 volunteers. I tested my experiment by having my subjects complete a questionnaire that asked for their age, ethnicity, gender, and whether or not they have a musical background. Then,I played a recording of three notes (C,B,G)and had the subjects listen to to each note one at a time. Then, they were asked to sing each note individually while I recorded the frequency of the note on the tuner.

#### Results

Females: 20% sang perfect. Males: 22% perfect. Age 10& under: 29% sang perfect. Age 11-20: 32% sang perfect. Age 21-30: 6% sang perfect. Age 31-44: 22% sang perfect. Age 45-65: 7% sang perfect. Age above 65: 0% sang perfect.

#### **Conclusions/Discussion**

Based on my data from my experiment, I have concluded that ethnicity, age, and musical background are all factors in determing whether or not one has perfect pitch. Gender is not a factor.

## **Summary Statement**

My projects's #1 goal is determing what factors affect perfect pitch.

## **Help Received**

I would like to give a huge thanks to my family who deove me to many houses to obtain volunteers for my experiment.