



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Joelle A. Mundo	Project Number J1310
Project Title The Affect of Age on Hearing High Pitches	
Abstract Objectives/Goals The objective of this study is the determine how age affects the ability to hear high pitches. Methods/Materials A quiet environment for testing, 24 8th grade subjects and 30 adult subjects ranging from 20 - 72 who used earbuds and headphones, a computer program with variable pitch of a single note. I was able to see the frequency of the note at all times while subject was not. The subject signaled when they could not longer hear the note,the frequency was recorded at that point. Results Summary of data shows the average highest to lowest pitch heard is as follows; the highest pitch 8th graders heard was 12.8 kHz, in adults (ages 20 -50)the highest pitch was 12 kHz, in adults (ages 50-60) the highest pitch was 9.15 kHz, in adults (ages 60 - 70) the highest pitch was 8.4 kHz. Conclusions/Discussion My hypothesis seems to be correct. I believe this, because when I averaged all of the different data together you could see there was a decline as the subjects got older. The main reason why the older subjects did not hear the high pitches is because as we get older hair cells in our ears die and start to get damaged, in addition as we get older our ear drums tend to be less flexible.	
Summary Statement My experiment is important because it demonstrates that hearing high pitches will probably decrease with age, which helps prepare people for the aging process.	
Help Received None, I performed the experiments myself.	