



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Sarah E. Hicks	Project Number J1709
Project Title Personal Stereo System Users: Are People Risking Hearing Loss?	
Abstract Objectives/Goals The purpose of my study was to test the volume levels that personal stereo system (PSS)users were listening at to see if the volume was loud enough to cause possible hearing loss over time, and if they were open to changing their listening habits when given a verbal warning. Methods/Materials I randomly selected 108 subjects (55 females, 53 males) between the ages of 9 and 65 years old, who were listening to personal stereo systems. With permission, I took sound level meter readings of their PSS volume/output. If their peak readings were 90dB or above, they were warned about possible hearing loss over time and asked to consider turning down their volume. Data was noted for peak volume, age, gender, and if they would change their listening habits. Results I found that 51% of my subjects listened to their PSS's at an average of 90dB or above (too loud per OSHA recommendations). More than half (72%) said that they would turn down their volume when warned about possible hearing loss. I also found that the females in my study listened to their PSS's at a louder average level (93 dB) than the males (86 dB). Conclusions/Discussion With the growing popularity of PSS's and earbuds/phones which can produce sounds of more than 115dB directly in the ear, potential hearing loss over time is a concern. In my study, half of the subjects were listening at dangerous sound levels (90 dB or above), highlighting the need for public education on the risks of hearing loss and how to prevent damage.	
Summary Statement I tested the loudness levels of people's personal stereo systems and took data on whether they would turn down the volume when warned that they were listening at a risky level.	
Help Received Dad helped with graphs and drove me to locate test subjects.	