



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Charles D. Dewey	Project Number S1403
Project Title Use of High Frequency Sound to Detect NIHL	
Abstract Objectives/Goals To Determine influence of Noise induced hearing loss v. presbycusis caused by direct application of sound, ie listening to more than an hour of loud music per day. Methods/Materials I used an oscillator to generate the high frequency tones, ultrasound, and a Fender Passport 250 to produce the tones on the 41 high school test subjects. the experiment was repeated three times for precision and accuracy. Results The Noise induced hearing loss that occurs in the subjects that are exposed to over an hour of loud music per day was starkly evident. Conclusions/Discussion The Noise induced hearing loss that the subjects experience is significantly greater than the hearing loss of the subjects that experience only presbycusis. If students listen to over an hour of loud music a day the shall become significantly more deaf than those students who do not listen to loud music.	
Summary Statement Determining the Influence of Loud music through Noise induced hearing loss.	
Help Received Micheal Talley provided Oscillator; Mr. Ruggieri provided Fender Pasport 250 and music room usage	