



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

Name(s) Chloe Little; Mohini Vadalia	Project Number 38827
Project Title Effect of Frequencies on the Human Brian's Memory Capacity: The Sound of Memory	
Objectives/Goals Discover and observe the impact of various frequencies upon the human memory capacity and effects upon concentration, cognition, and focus. Abstract Methods/Materials Materials: 7 Volunteers (within the age of 13-18) Frequency generator Enclosed area Simplistic images Timer Writing utensils Paper Method: Gathered 7 volunteers to test the effect of numerous tones and pitches of frequencies and discover the impact upon the memory and concentration of their brain. 1.The 7 volunteers enter the area. 2.Show 1 image for 10 seconds without the use of a frequency. 3.Repeat step 2 for the next 4 images. 4.Allow 5 minutes for the volunteers to describe each of the 5 pictures from memory. 5.Repeat step 2,3,4 for the next 4 frequencies. (200, 3700, 11100, 15000) 6. Record the results of data. Results Our experiment showed that the 11,100 Hertz frequency was the most effective in enhancing the memory of our volunteers. After completing two trials, both trials showed that the points were, on average, the highest for the round of pictures shown while the 11100 Hertz frequency played, meaning that this session had the most details from participants, in both trials. Conclusions/Discussion To further this science experiment as concluded in the results, the 11,100 Hertz frequency was the most beneficial for the participants to recall their memory, thus this can serve as a psycho-acoustic medicine to relieve stress pain or even aid the mentally ill in calming their breathing level and their active minds to a relaxed state or this can serve to prevent cancers or treat cancers and other diseases in certain situation. It can also increase memory functions, enhance sleep cycles and synchronize the left and right hemispheres	
Summary Statement The cognitive experiment explores the impact of different frequencies on the visual memory and concentration of a human, ultimately discovering that higher frequencies may serve as psycho-acoustic medicine for mentally disabled patients.	
Help Received The 7 volunteers tested upon in our experiment were our only assistance since my partner and I designed and performed the project ourselves.	