



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Vatsal Jain; Vivek Patel	<b>Project Number</b> <b>J0717</b>
<b>Project Title</b> <b>Can You Hear Music without Music? Dwell into the World of Auditory Pareidolia</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> This experiment is aimed at discovering, #Does our expectation affect our hearing perception?# We also want to find out if children#s hearing perception is sharper and more accurate than adults?</p> <p><b>Methods/Materials</b> In this project, we will determine how long the volunteers perceive music in the absence of it. In this experiment we will be using a DJ software so we can fade a song into static. Once the song was completely stopped and there was only static we started a stopwatch. We stopped the stopwatch when our test subject indicated they could not #hear# the music anymore. For this experiment we need a computer with a headphone jack, headphones, demo version of Traktor Pro 2, white noise sound file, stopwatch, MP3 file of a song, and 10 or more volunteers.</p> <p><b>Results</b> Our result proves that young children had a faster response time to indicate the actual music has been stopped than adults and teenagers. The experiment also proved our hypotheses wrong, children#s hearing perception is sharper and more accurate compare to adult and teenagers#.</p> <p><b>Conclusions/Discussion</b> The results showed that children had sharper hearing and if they listened to the music for thirty seconds they had a faster reaction time. Adults are more exposed and developed to more variety of ideas so they assume and expect more in their heads compared to children. Children have more relaxed, less pre-assumption so their state of mind is much clearer. Music is a good way to relieve your stress because it helps calm down your mind, muscles, and dilute your tense thoughts and natural fear to unknown. Music may one day be used to achieve effects on relieving patient anxiety during surgery. Pareidolia could be used in neurosurgery and curing bodily diseases like cancer and diabetes.</p>	
<b>Summary Statement</b> We tested how long people can perceive music in the absence of it.	
<b>Help Received</b> Mom helped printing my reports and setting up my board.	