



Colorado Science and Engineering Fair

2025 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: The Heart of Music

Finalist's Name: Chloe Stone

School and City: Limon, Limon Jr/Sr High School

Sponsor's Name: Becky Thompson

Category: Biomedical & Health Sciences

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

Music therapy has become a more practiced and researched treatment throughout science. But how much does music really affect our heart rate? This practice is a newer medical treatment. This treatment can help with anxiety, dementia, and autism along with other diagnoses.

The research was based on how much music affects human heart rates. The experiment took three different songs, a sad, rock, and pop song and tested how the heart reacted to the music while listening. Each participant was taken one by one in a silent environment to be tested on. Each song was played while their heart rate was recorded each second of the song. This showed how the music increased or decreased the heart rate according to the specific song.

The results of the experiments showed that the slower sad song was in most all cases decreased. Between the other two songs it was significantly similar. The biggest effect resulted in the connection between the participants and the music. My beliefs are that if the participants were able to choose a song they would listen to and compare the heart rate to the song chosen the range between them would be completely different. This experiment was also hard to judge because no one has the exact same heart rate and each situation is different. But these results came close to having little to no effect on the heart rate.

This experiment was to investigate different music affecting one's heart rate and if music therapy is very effective. There was a difference between the song and change of heart rate but not as significantly as presumed. If participants and patients were able to have a connection between the music, then I believe that this experiment would be successful and more useful.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature:

Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**