



CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

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| Name(s) Nicole A. Heller | Project Number J0313 |
| Project Title Turn It Up! | |
| Abstract Objectives/Goals I decided to find out what effect classical music and hard rock have on a person's heart rate because I always feel more relaxed when listening to classical music and feel stimulated when I listen to hard rock. I wanted to find out if music really has an effect on the heart rate for most people. Methods/Materials I had my friends and neighbors come over to my house over the course of three days. They sat, propped up on my bed while I took their heart rate with my dad's blood pressure monitor and by hand. I had each subject listen to five minutes of classical music from my iPod, through Bose headphones. The songs I chose were #Für Elyse# and #Romeo and Juliet# from Victoria's Secret Classics by Request with the London Symphony Orchestra. After the music I took their heart rate again the same way as the first time. Then I had them wait five minutes before listening to the hard rock songs, #Judy is a Punk," #Suzy is a Headbanger# and #Let's Dance# from It's Alive by the Ramones. After five minutes of rock I took their heart rate again the same way. Results The results of my experiment show that 9 of the 12 people's heart rates went down from their normal heart rate while listening to classical music and 3 of the 12 people's heart rate went up from their normal heart rate while listening to classical music. 10 of the 12 people's heart rate went up from their normal heart rate while listening to hard rock and 2 of the 12 people's heart rate went down from their normal heart rate while listening to hard rock. Conclusions/Discussion My conclusion accepts my hypothesis. 75% of the subjects' heart rates went down when listening to classical music and 83% of the subjects' heart rates went up when listening to hard rock. I learned that for most people, heart rates go down with classical and up with hard rock from their normal rates. But there are going to be some people whose heart rates will go up with classical and down with rock, because of some emotional reason attached to a song or type of music. I don't think my hard rock songs were hard enough and I think my classical music could have been softer. I also think I should have measured the subjects' pulses in between the classical music and the hard rock. The more this project is repeated the more it will show that the majority of subjects will experience the same effect but there will always be exceptions for people that are effected by music in different ways. | |
| Summary Statement I tested the effect of music on the heartrate. | |
| Help Received My friends and neighbors helped me by letting me take their pulse and listening to music; my dad let me use his blood pressure monitor | |