



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Emily J. Zolfaghari	Project Number J0337
Project Title Step It Up: A Study of Music and Exercise	
Abstract Objectives/Goals In my experiment I ruminated on whether the tempo of music affects aerobic exercise. If so, then music with more beats per minute will increase the number of steps a person takes in a given amount of time. Methods/Materials The materials needed for my experiment are: a pedometer, watch, 4 humans, 5 sheet music (for different beats), 5 songs that can be played on a cd (that is same arrangement as sheet music), pen and paper, an open area for walking, a CD player, metronome, and headphones. In doing this experiment, you find the tempo located on the left hand corner of the sheet music, if not, you play the metronome according to the arrangement of music. Play the tempo against a watch set for one minute. This will give you the beats per minute. Repeat to all of the different songs. Talk the four participants and while wearing the pedometer, allow them to walk around the open area for 5 minutes while listening to a selected song. Once done with 5 minutes, record the number of steps taken for each tempo of song listened to and repeat for other selected tempos. Average out the number of steps taken from each of the participants for each of the tempos after walking for 5 minutes to each of the 5 songs. This will help you to find the results on which tempo allows a person to walk further in a given amount of time. Results The results came out to prove that people walk further when listening to music around a tempo of 104-116. This proved my hypothesis incorrect. Conclusions/Discussion I consider my experiment inconclusive because of the carpooling times taken place for each of the participants. By some parents waiting in the parking lot, it was noticed that participants would walk more briskly when knowing the parents were waiting for them. Although this was noticed, the outcome of my experiment came out to be that people walk further when listening to a more moderate tempo of 104-116.	
Summary Statement How the tempo of music affects the distance people walk in a given amount of time.	
Help Received My friends for participating in the experiment and my mother for driving me around	