



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Shantal L. Reich	Project Number J0322
Project Title Can Graphology Be a Form of Biofeedback?	
Abstract Objectives/Goals My hypothesis stated that handwriting changes by mood/state of mind. The question was posed whether one can use graphology to measure and characterize a person's state of mind. If a person's mental state is expressed in handwriting, then perhaps one could use graphology to measure the mood of a person as a form of biofeedback. Methods/Materials # iPod # iPod charging wire # two sets of earphones # two testing pens # pencil # desk # chair # Line Slope, Slant, and Size measuring sheets for analyzing handwriting # measurements key # ruler # #Y adapter# # permission slips # consent forms # 64 subjects ages seven through fourteen # 55 adults # testing sheets that have the following sentences written on it: When I listen to music it affects my mood. Sometimes it is positive and sometimes it is not. Results When agitated, if there was a change, most writing became smaller. The handwriting of the subjects who listened to relaxing music showed widening between the spaces of each word. Conclusions/Discussion The results showed there was an overall change in subjects' samples in size of writing/spacing and in line slope when listening to agitating/relaxing music. Thus, the hypothesis was partially supported. An intriguing aspect of the results is the possibility that a reverse link exists: if changes in state of mind can affect handwriting, could deliberate handwriting changes affect state of mind? Further study is needed.	
Summary Statement This project sought to discover if, on the whole, measurable changes in handwriting could be observed from subjects' samples, respectively, in a state of agitation and relaxation in comparison with a control sample.	
Help Received My mother drove me around to get supplies for board and to test subjects. My father helped to edit my writing, checking grammar, spelling, etc. School Advisor had overall input from beginning to end.	