

# CALIFORNIA STATE SCIENCE FAIR 2013 PROJECT SUMMARY

Name(s)

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**Project Number** 

**S0406** 

### **Project Title**

# **Determining Correlations between Indicative Dominant Sense and Comprehension Aptitude**

## higatives/Cools

## Objectives/Goals

The purpose of the study was to conclude whether people's "dominant" sense can be determined through tests pitting several frequently-used senses against each other. The study also determined whether this "dominant" sense has any correlation to comprehension aptitude, better known as "learning style".

**Abstract** 

#### Methods/Materials

To determine the subject's dominant sense, the visual, auditory and tactile influences on their perception were tested. Students from Palos Verdes Peninsula High School were given visual-vs.-tactile, tactile-vs.-auditory, and visual-vs.-auditory tests to determine which sense extended the greatest influence over their perception. Comprehension aptitude was determined by three procedures. They utilized visual, tactile, and auditory cues. The test that the subject performed the best on was dubbed their comprehension aptitude.

#### Results

The data collected showed that 100% of subjects showed a clear inclination towards a particular sense as their dominant sense. In the comprehension aptitude test, 75% of subjects displayed an inclination towards a particular sense as their most favored learning cues. 67% of subjects' first comprehension aptitude directly correlated to their first dominant sense. 58% of subjects' first dominant sense directly correlated to their primary comprehension aptitude. However, 25% of subjects' second dominant sense corresponded with their primary comprehension aptitude.

#### Conclusions/Discussion

The results displayed that humans do tend to favor one sense which provides the most input for their perception. It also supported the hypothesis for the most part: most of the subjects had direct correspondence between their dominant sense and comprehension aptitude. However, a significant percentage had correlations between their second dominant sense and primary comprehension aptitude. These results provide important knowledge about the senses as well as valuable information for educators to better instruct their students.

## **Summary Statement**

The central focus of the project was to determine whether people have a dominant sense which exudes the greatest amount of influence over their perception, and whether this dominant sense has any correlation to comprehension aptitude.

## **Help Received**

My teacher Mr. Peter Starodub provided guidance and support. Ms. Sandy Gregory, Dr. Sunila Fuster, Dr. Laslo Gyermek, Dr. Jeffrey Luther, and brother Kiran Ekanayake provided valuable input regarding experimental design.