



CALIFORNIA STATE SCIENCE FAIR 2012 PROJECT SUMMARY

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Project Title Relative Importance of Facial Features Assessed by Teenagers' Accuracy of Subject Identification	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The goals of this project are to identify: the facial feature (eye, eyebrow, nose, lips and chin) which is most prevalent in facial identification, differences between recognition of male and female features, differences between male and female perception of faces, and retention differences between facial features of a stranger versus a familiar face.</p> <p>Methods/Materials I had teenage test takers participate in a facial feature recognition test that I created by having them identify: celebrities by viewing one facial feature at a time (ie: eye, eyebrow, etc), the gender of facial features, and a stranger's facial feature out of a group of 3 options. The test takers began the test by studying the chosen celebrities faces for 5 minutes. Participants were provided with a blank answer sheet, a list of celebrities, writing utensils, a laptop with the test in a PowerPoint format, and a quiet working space.</p> <p>Results The eye, nose, and lips prevailed as the most prominent facial features with respective 54.20%, 52.62% and 48.30% accuracy of totaled male and female scores. Women were more accurate than men in identifying these features. There was no significant difference in male test takers identifying male and female celebrities, scoring 69.70% and 65.91% respectively. Female test takers exhibited a similar yet more accurate pattern on identifying male and female celebrities, scoring 82.05% and 82.70% respectively. Overall, female test takers were significantly more accurate in identifying the gender of random, noncelebrity facial features scoring 82.31%, compared to the male score of 68.18%. Females were only moderately more accurate than males at identifying a stranger's features than that of a known person, scoring 60% and 52.7% respectively.</p> <p>Conclusions/Discussion This experiment demonstrates that the eye, nose, and lips are the majorly identifiable features of a human face, whereas the chin and eyebrows are insignificant in distinguishing human faces from one another. Recent research that shows that men and women use different parts of the brain for human identification supports the results in this experiment, revealing the female mental approach as more astute in facial recognition than that of males.</p>	
Summary Statement The purpose of this project is to identify which human facial feature is most prevalent and to reveal any patterns or differences between male and female accuracy in facial feature perception.	
Help Received Sister helped recruit test takers	