



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Keith P. Shaller	Project Number J0321
Project Title Refrigerator "Blindness:" What Factors Affect Search Time?	
Abstract Objectives/Goals Problem: What group of people, based on a number of variables (age, gender, city of residence, etc.) can find a given object in a refrigerator in the least time? Hypothesis: I believe the women will find the objective the fastest. Methods/Materials Materials: People (varied template); a refrigerator, strategically stocked with #window dressing# in a standardized pattern to hide the objective; strawberry yogurt, the objective that subjects will search for; flyers advertising for subjects; a personal questionnaire for data gathering; pens (for questionnaire); clipboards (for questionnaire); stopwatch (to time subjects); space for 50 to 75 people to keep subjects separated before and after testing; food and drink for said people; quiet environment in which to test the subjects. Procedure: A. Invite 100 to 200 people of various ages, genders, states of marriage, and areas of residence. Each test subject fills out a questionnaire that asks about certain personal characteristics, to categorize each subject into different groups, and to see what factors affect the ability to find objects. Create a standardized refrigerator layout, that will hide the standard objective. Time the test subjects. Repeat for each subject. B. The manipulated variable was the type of person C. There were 44 different test subjects, and tested each one time. D. I measured the amount of time each subject needed. Results Results: The average female time was 17 seconds, seven seconds less than the average male time of 24 seconds. Married persons# average time, 19 seconds, was three seconds faster than the singles# average time of 22 seconds. Those who lived in Tustin were faster than people from other areas. People with many (more than 3) others in a household were faster than those with few (less than 3). Conclusions/Discussion Conclusions: The females, on average, were faster than the males. This supports my original hypothesis. Middle-aged women were the fastest and elder men were slowest. Married persons were faster than singles. The overall fastest group was the middle-aged, married females from Tustin with more than 3 people in their household. The slowest group was the elder, single males not from Tustin with less than three people in their household.	
Summary Statement The focus of this project was to see what variables affected the ability of different groups of humans to "forage" in a refrigerator.	
Help Received Parents assisted with keeping refrigerator properly stocked for each group of test subjects and helped me to locate potential test subjects; Mother took photos while I was conducting testing.	