



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Allison G. Weiner	Project Number J0337
Project Title Catch It If You Can	
Abstract Objectives/Goals This project investigated hand-eye coordination. Hand-eye coordination is the ability to guide with the eyes the movement of the hand. Hand-eye coordination requires all the body to make it work. The brain must receive the information, process it and then send it out to the hand to tell the hand what to do. If hand-eye coordination was better understood then there would be more ways to improve it and peoples' lives could be safer. Methods/Materials Eighty people were used in this experiment. There were 10 females and 10 males in the age groups of 7-9, 12-14, 40-50 and 65-80. Each of these subjects were tested for hand-eye reaction time. First the subjects would fill out a questionnaire. Then the subject would sit down in a chair with their dominant hand out. The yardstick would be dropped in between the subject's hand and they would catch it. The yardstick would be dropped twice in between the subject's dominant hand. After the second time it would be measured where the subject caught the yardstick. The same process would be carried out on the subject's non-dominant hand. Results As a result of this study, it was found that the 12-14 year old male's non-dominant hand had the quickest reaction time. They had an average of a 16.2cm. reaction time. The females at 12-14 year olds were only 0.3cm. slower than the males. Through this research it was also found that overall the 7-9 year olds had the slowest reaction time, the 65-80 year olds the second slowest time, the 40-50 year olds the third slowest time and the 12-14 year olds the fastest reaction time. Also, through this study it was discovered that in 75% of the groups, the non-dominant hand had a quicker reaction time than the dominant hand. This could have been due to the fact that the non-dominant hand was tested second after the dominant hand. It was also learned that males had a quicker reaction time than the females. The males were only .01cm. quicker than the females. Conclusions/Discussion The major conclusion drawn here was that the non-dominant hand had a quicker reaction time than the dominant hand. It was also found that males had a quicker reaction time than females. And finally it was discovered that younger people had quicker reaction times than older or middle-aged people.	
Summary Statement My project is about what factors affect hand-eye coordination.	
Help Received My parents helped me to type my report and helped me to acquire my subjects for the experiment.	