



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> <b>Sophie Ballard; Cori Bratby-Rudd</b>	<b>Project Number</b> <b>J0302</b>
<b>Project Title</b> <b>Think Fast</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To discover which gender has better reflexes as they grow older.</p> <p><b>Methods/Materials</b> 1. Put the test subject's hands in parallel, clapping position, 9.9 centimeters apart. 2. Place the ruler 9.9 centimeters above the test subject's hands. 3. Drop the ruler at an unappointed time between the test subject's hands (make sure to tell the subject to attempt to catch the ruler as fast as they can). 4. Record the level at which they caught it. 5. Repeat steps 1-4 two more times. 6. Average the data. Materials: Ruler, 30 test subjects.</p> <p><b>Results</b> Young females have average reflexes of 9.37. Young males have only slightly slower hand-eye coordination with a mark of 9.43. Both middle-aged males and females had scores that were more advanced than young and seniors. Middle-aged males scored a low 6.18, while middle-aged females average was 8.20. 10.21 was the substandard total that the senior males attained. The senior females managed a typical score of 9.67. The averages show that the females' marks surpassed the males' marks in the young and senior categories. In the middle-aged category, the males did better than the females. The data shows that the females outshine the males in two out of the three categories.</p> <p><b>Conclusions/Discussion</b> 1. Our results show females did better than males overall. Males exceeded females in the middle-aged group, but females surpassed males in the young and senior categories. This conclusion proves our hypothesis incorrect. We guessed that males would do better than females. 2. A pattern that we noticed was people who were more active scored better. Within each category the test subjects tended to have similar scores. We found another similarity: young people and seniors had scores in relatively the same range. Another pattern we noticed was, the longer you held the test subject in suspense, the worse their scores were. 3. We learned that when human development is at its peak, people have quicker reflexes. For instance, Middle-aged people are at their climax in reflexes, so they had the lowest (the lower their score is, the better their reflexes are) scores out of everyone. 4. One possible source of error was whether or not the test subject was in a standing or sitting position. Another one could have occurred if the test subject moved their hands after we measured the distance between them. Whether or not the test subject was physically active could greatly influence their average.</p>	
<b>Summary Statement</b> We tested people's voluntary reflexes and separated the data by gender and age.	
<b>Help Received</b> Step-Mother helped cut out title; All parents helped with carpooling; All parents listened to oral presentation; Mother helped with application to society; All parents critiqued our oral presentation and report;	