



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Nick B. Watkins	Project Number J1218
Project Title I Can See Clearly Now	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this experiment is to determine if adolescent (13-14 year old) girls blink more than adolescent (13-14 year old) boys.</p> <p>Methods/Materials Sixty Marshall Middle School students were tested to determine how many times each student blinked in one minute. Before the main segment of the interviews subjects were asked about their age, their height, and the height of their (same-sex) parent. The subjects were then asked to tell a story based on two pictures that they were shown. The story was limited to one minute, as measured by a Robic Twin Chronograph and Count Down Timer. During the story, the tester counted the number of times the subject blinked using a Champion Sports Tally Counter. After the story, subjects were asked whether they were wearing contacts or had any eye issues. The results (the number of times the subjects blinked) were written on a customized Microsoft Excel Sheet. After the data was collected, it was transferred onto a computer and averages were calculated. Then the difference between these two averages was determined.</p> <p>Results The results showed that 13-14 year old girls blink 30.6% more times per minute than do boys of the same age.</p> <p>Conclusions/Discussion This experiment established four main conclusions. First, adolescent girls do in fact blink more than adolescent boys. Second, the development of blinking does parallel physical development, which confirms the hypothesis of this experiment. Third, there is a small but interesting association between the difference in height between the subject and their (same sex) parent and the subject's blink rate. Fourth, the use of contacts had a slight effect on spontaneous blink rate (the difference between the boys and girls who wore contacts was 31.2%, compared to 30.6% for the remaining subjects.)</p>	
Summary Statement This experiment has found that adolescent girls blink more than adolescent boys because of their heightened development.	
Help Received Professor Nicholas Christenfeld (UCSD) confirmed the standard deviation for the data and calculated the standard error; Doctor Alan J. Zametkin (NIH) wrote an important paper on the topic and helped with the bibliographic search; Eric Watkins helped with the revision of many drafts; and Teresa Elston gave	