



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Charlotte Anderson; Sarah Miller	Project Number J0602
Project Title Do You See What I See?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective/goal of our project was to find out if, when looking at 11 optical illusions, boys saw different images than girls. We predicted that there would be 5 differences in the answers of boys and girls.</p> <p>Methods/Materials</p> <ol style="list-style-type: none">1. Eleven optical illusions of 2 types. The two different types of illusions are shape/image contrast illusions and double image illusions.2. About 80 people (roughly 40 boys and 40 girls); about 1/4 of the people selected randomly, and the rest selected conveniently. No specific age group of people.3. Paper to record observations on. We made a special observation sheet that is included in report.4. Pencil/pen to record.5. A computer to research 11 optical illusions and finalize project. <p>Results The results from our project were that, out of eleven optical illusions, there were three differences in answers of boys and girls (instead of the five differences that we predicted). Two of the three differences in answers were in double image illusions. The other difference in answer was in a shape/image contrast illusion. The first image that caused a difference in answer between boys and girls was a vase or two faces. The majority of boys saw two faces, while the majority of girls saw a vase. The second image that caused a difference in answer between boys and girls was a porch looking upwards or a porch looking downwards. On average, the majority of boys said the porch was looking down. The majority of girls said that the porch was looking up. The third image that caused a difference in answer between boys and girls was the word "lift" or jumbled black shapes. On average, the majority of boys saw the word "lift", and the majority of girls saw jumbled black shapes.</p> <p>Conclusions/Discussion Our hypothesis was that there would be at least 5 differences in answers between boys and girls because boys and girls sometimes see things differently. Our hypothesis was incorrect because the results show that there were only 3 differences in answers between boys and girls. But, we were partially right; we just did not predict the correct number of differences. Some sources of error were: not all of our subjects were selected randomly, subjects' answers might have been influenced by other subjects' answers, the order of the images might have had an effect on subjects' answers, and there was an uneven number in genders.</p>	
Summary Statement Our project tests whether boys see a different image than girls when looking at optical illusions.	
Help Received Mrs. Anderson drove us to test random people in Pasadena; Mrs. Miller helped us choose the color and outline for our poster; Brianna Miller took pictures of us while working.	