



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Samantha Smith; Julia Vasquez	Project Number J0734
Project Title What Do You See?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of our experiment is to see whether the eye color affects a persons ability to see different colors through dark light. We believe a darker eye color will see better in the dark because they have more rod cells.</p> <p>Methods/Materials Materials List:red, orange, yellow, green, blue, and purple construction paper, 10 (5 female 5 male) people per eye color, a room equivalent to 4ft by 5ft, Light meter-lux measurement tool by Vlad Polyanskiy app, measuring tape, science fair notebooks, colorblind test, timer, ipod or iphone, tape. Method:Before we actually started testing, we had to check and see whether our subjects are colorblind or not. We did this by using one color blind test. If they got it wrong, we were not able to use them in our experiment. Next, we organized the people we were going to use by categorizing them into 3 groups, brown, blue and hazel eyed. There was ten people in each group, five were female and the other five male. After, we were finally able to start the actual testing by taping the 6 construction papers to the wall and marking a line for the people to stand on, 3.5 feet away from the wall. Then we asked them to bow down their heads as one of us escorted them to the line. While inside the closet, one of us asked them to tell us what color they saw. Another person was outside the closet timing them for a total of 30 seconds and would knock on the door when their time was up. This person would also record the data given from the team memeber inside the closet.</p> <p>Results Our test results showed that the people with brown eyes did the best at identifying the six different colors, especially the color blue since 90% of the 10 people identified it. At identifying the other colors they scored no lower than a 60%. Blue eyes were able to recognize most of the colors but was short 40% for purple, causing the average to be a little lower than the brown eyed people. All the other colors they recognized well. hazel didn't do nearly as well, but got the best percentage for the color purple, 80%, and unfortunately failed at figuring out most of the other colors.</p> <p>Conclusions/Discussion Results showed that brown eyes did the best because they had more rod cells than blue and hazel eyes do.The brown eyed people's average was about 70% which was the highest percentage out of the other eye colors. Our hypothesis was correct because we thought that brown eyes would see the colors the best in the dark.</p>	
Summary Statement My partner and I were testing which eye color could see different colors in the dark the best.	
Help Received Our science teacher corrected and revised our work that went our report and on our board.	