CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
Ian J. Charlton

Project Number
J1005

Project Title
What You DO NOT See - and Why You Don't See It

Abstract

Objectives/Goals
The purpose of my project was to measure the perceived blind spot OF each eye. The perceived blind spot is an extension of the blind spot IN the eye at the point where the Optic Nerve enters the back of the Retina. My Hypothesis was that, at an individuals arms length, the perceived blind spot was beteween 3 and 4 centemeters.

Methods/Materials
I designed my own blind-spot test sheet and tested 25 subjects at random. The results of the testing were tabulated and analyzed.

Results
On an average basis, the data supports my hypothesis. The average width of the perceived blind spot was in the 3 to 4 centemeter range. I discovered a wide range of widths, and my data indicated that the right eye had a larger perceived blind spot than the left eye. A distribution analysis of my test results does not support my hypothesis.

Conclusions/Discussion
I consulted an Optomotrist, Dr. Bette Gould, who knew of no reason why the width of the right eyes blind spot would be significantly different than the left eyes'. She did suggest that my testing may have been flawed if I did not ensure that the test sheet was centered directly in front of the subject. Were I to repeat this test I would correct this oversight. Most people are not aware that they have a blind spot, since it does not normally impact what we see with both eyes. Once aware of their blind spots, people are intrested in knowing that it should remain the same for all of their life unless they have eye damage or damge to the optic nerve.

Summary Statement
My project was about measuring and analyzing the perceived blind spot of each eye.

Help Received
My parents helped with loading my test data into our home computer. They also helped with my presentation material and with the project layout. I interviewed Dr. Bette Gould who provided some expert advise and a sample of an "Amster Grid" which shows the actual size of the blind spot IN each eye.