CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
J0601

Project Title
Sights Unseen: The Surprising Effects of Inattentional Blindness

Abstract

Objectives/Goals
I heard about a phenomenon known as "inattentional blindness." The article I read said lifeguards sometimes do not notice swimmers drowning at the bottom of a pool because they constantly focus on activity at the top of the pool. According to research, inattentional blindness affects the ability to notice something, even if it is in the field of vision. Research showed nearly half of adults tested demonstrated inattentional blindness in experiments. I wondered if inattentional blindness would as strongly affect people my age. I decided to make a video and try to find an answer.

Methods/Materials
I made a video in which two teams passed a ball. Three players wore white shirts, and three wore black shirts. The test subjects were instructed to count the number of passes made by white team members to other players in white. Halfway through the video, a man in a hooded, black Halloween costume walked through the middle of the game area. He looked directly at the camera and remained on the screen for eight seconds. Three grade levels of participants in three different classes viewed the video: sixth, seventh and eighth graders. The participants were instructed they were being tested for their ability to accurately follow a fast-paced game. They were told to keep count of passes made by the team in white shirts. The class sizes were kept small so all participants could easily view the screen (a SmartBoard). After the participants viewed the video, they were each asked to complete a questionnaire. They recorded the number of passes they counted and also wrote down anything unusual they might have noticed during the video.

Results
Some participants wrote comments about the "pattern" of passes or height of a player or a "hand-off" that occurred during the game. Only two subjects, 3% of the total, one male and one female, mentioned seeing the strange intruder in a Halloween costume that strolled through the game area. Later, when the participants discovered the true aim of the video, test subjects still could not recall having seen the intruder at all!

Conclusions/Discussion
Unlike the adults tested by research scientists, instead of half of the test group experiencing inattentional blindness, 97% of the middle school students were affected by this phenomenon. To my surprise, the middle school students seemed even more likely than adults to overlook something unexpected in the field of vision.

Summary Statement
This project tested the effects of "inattentional blindness", the inability to perceive something unexpected in the field of vision, on middle school students and found 97% of them experienced inattentional blindness.

Help Received
My parents helped with transferring the video to a CD; the actors that were in the video; my science teacher who helped me in many ways; and the students that watched the video and answered my test questions.