CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)

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Project Number

S0411

Project Title

Perception of Information through Peripheral Vision

Abstract

Objectives/Goals

The main purpose of the experiment was to explore the capability of males' and females' peripheral vision. This experiment was tested by two methods. In the first method, the researcher guided the visual attention of the subjects with a thumb to one side, meanwhile the other researcher displayed a word written on a notepad within the peripheral visual range of the subject for five seconds. In the second method, the subject follows the previous directions of the researcher while a colored note card was held in the subject's peripheral vision. Then the subject was asked to name a color. Overall, in the first test 47% of the male subjects were able to identify the word in their peripheral vision, whereas 67% of female subjects were able to identify the word presented. In the second test, 47% of males were able to name the color in their peripheral vision, and in contrast 80% of females were able to name the color. Comprehensively, there is a substantial difference in the capability of the peripheral vision between the two sexes.

Methods/Materials

For the first test, ask subject to read through given text and stand directly in front of researcher. One researcher extends left arm and instructs the subject to focus on the thumb for five seconds while covering their left eye. During the five seconds, the other researcher holds up notepad with a word within the subject's peripheral vision. Afterwards, instruct the subject to scan through the given text and inquire a word that stood out to them. For the second test, the subject is asked to follow the previous instructions while the researcher holds up a colored note card(red/blue). After five seconds, inquire the subject to name a color that comes to mind.

Results

In the first test 67% of females were able to identify the given word, while only 47% of men were able to do so. In the second test 80% of women distinguished the color on the note card, while only 47% of men did.

Conclusions/Discussion

The result of the experiment associates peripheral vision of human species with Evolution. Evolutionarily and historically, males played a bigger role as hunters and their visual focus has always been in the forward direction. On the other hand, females have had roles that required more peripheral vision and sensibility of their surroundings such as motherhood. In other words, Evolution favors females more in their trait of visually perceiving information in surroundings.

Summary Statement

We tested the differences in capability peripheral vision between males and females.

Help Received

None. We designed, built, and performed the experiments by ourselves.