CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
S1202

Project Title
A Computer Model of Human Perception

Abstract

Objectives/Goals
The goal of this project was to write a computer program that would be able to solve a simple letter analogy based on human perception. For example, if the program was given "ABC is to ABD as IJK is to what?", then the program will return an answer for "what", such as "IJL" or "IJD".

Methods/Materials
A programming language known as Scheme was used to create and compile this program. The progeram uses human ideas and links between them in order to make connections between the letters, known as perceptual structures. Small programs called "codelets" use these ideas to make the connections between letters. All of this happens in the "workspace" of the program.

Results
The program was able to build mental connections between the different letters in the analogy. However, the program never fully translated an answer.

Conclusions/Discussion
The program was not able to run completely due to programming errors that prevented it from finishing. The program must be debugged before it can be used.

Summary Statement
This project is about using computers to model human perception in solving letter-string analogies.

Help Received
Teacher and high school senior helped mentor and to understand program logic and syntax.