



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Adam Z. Noworolski	Project Number J1408
Project Title Who Can Solve a Maze Faster, a Computer or a Human?	
Abstract Objectives/Goals To discover who can solve increasingly difficult mazes faster, a computer or a human. Methods/Materials First I did some research on some computer algorithms that solve mazes. Then I created a computer program that solves mazes, using the wall-follower algorithm, with Scratch. Then, I ran the computer through three increasingly difficult mazes, five times. I recorded those times in data tables and graphs. Then, I tested humans through those same mazes, five times. I recorded and graphed this data as well. Results On the first maze, humans solved the maze much faster than the computers but on the second and third mazes, the computer beat the humans. Conclusions/Discussion This data is this way because humans try to look throughout the maze and try to reach the exit by the shortest visible path. On the first maze, the path is clearly visible, so the human traverses it almost instantly. The computer has to traverse all around the maze before it finally reaches the end. On the second and third mazes, the human cannot see a visible path to the end, so he guesses. When he guesses the wrong path, he has to backtrack. The computer can backtrack much faster than the human, so with mazes with multiple dead-ends; computers would typically solve those mazes faster.	
Summary Statement Comparing Humans and Computers on solving increasingly complex mazes.	
Help Received Parents bought poster board	