

# CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

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# Project Number **S1201**

# Project Title Can a Robot be Taught?

# **Objectives/Goals**

#### Abstract

My project covers robotics, programming and Artificial Intelligence. The amount of applications on a subject like this is unbelievable. My project specifically illustrates the ability of a robot to find its way through a path, record it, and return the information.

#### Methods/Materials

For this project I built a robot, a maze, and the program. The program acts as a list of instructions for many difficulties that the robot will have to endeavor. The program controlled a Basic 2 stamp. The stamp was connected to three IR sensors that were used to detect walls. The program used the data and recorded it.

# Results

Through tests i was able to see that the robot was unable to move in a straight line, this was caused by the servo tolerances on the motors, which caused a variance in the speed. The robot was able to complete the maze, record it, and repeat it without its IR sensors.

# **Conclusions/Discussion**

In the end the robot was a success it had run the maze and learned it, and it was able to use its memory to navigate blindly. This shows that the robot was able to learn and that the Artificial Intelligence was a success.

# **Summary Statement**

A robot will attempt to navigate a maze, remember it, and use its memory to repeat the course.

# Help Received

Brother helped build the maze.