



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Victoria N. Hutchins	Project Number J1118
Project Title Rat Intelligence: Does Gender Affect Learning Ability?	
Abstract Objectives/Goals The object of this experiment was to study rats' intelligence that can be measured by speed of learning and if gender makes a difference. Methods/Materials I observed six rats (three females and three males) behavior for eight weeks. I tested the rats for left/right handedness. I built four different types of mazes: Classic, Reverse Classic, Y and T. I used foam board, scotch tape, hot glue, T pins, and colored tape. Results Through my experiment I observed out that female and male rats' behavior was different. All female rats were right handed. Two male rats were left handed and one male rat was ambidextrous. Female rats were faster than male rats in three mazes, but they were slightly slower than the males only in the T maze. The average time for female rats was 85seconds and for male rats was 126seconds. The ratio of the female rats' average time to the male rats' average time was 0.65 Conclusions/Discussion The results from the experiment support my hypothesis that female rats learn the maze pathways faster than the male rats. I found out that rats are left or right handed. My experiment can help to uncover general principles about the learning process and it can be applied to many species, including humans. Understanding how animal intelligence works helps me understand how my intelligence works and how I could relate my experiment to girl's and boy's behavior and learning process.	
Summary Statement Through my experiment and observations, my results demonstrated that female rats learn the pathway of the mazes faster than the males. I also observed out that the rats are left or right handed.	
Help Received Mrs. Sean Senechal provided support with my research and experiment. My parents provided transportation.	