CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
S0316

Project Title
Does Human Affection Affect Mus musculus's Performance while in a Maze?

Abstract

Objectives/Goals
The intent behind this experiment was to determine if human affection alters Mus Musculus's (common house mouse) performance in a maze. My hypothesis stated that mice given human affection would perform better in a maze than mice given no affection.

Methods/Materials
I prepared two cages in like fashion with red cedar bedding, exercise wheels, food containers, and water bottles. Randomly, I split the mice into two groups of 6, one group that was to recieve affection, and the other, a control group that would remain isolated with very little human interaction. Each day I played only with the first group of mice giving lots of attention. The control group I left isolated in the garage where they would have little stimulation from the family. I then constructed a maze using a diagram from the Internet. The experiment was conducted over a ten-week period. Once a week for ten weeks, I measured each mouse individually and recorded their weights in grams. After starving the mice for two consecutive days each week, I ran each mouse through the maze and recorded how long it took to reach the end and retrieve their food reward.

Results
Analysis of the results proved my hypothesis to be correct. The isolated group of mice on average took about 37 minutes to complete the maze. In contrast, the group recieving human affection took an average of only 8 minutes to complete the maze. This is about 4 times faster than the isolated group of mice! Additionally, the average weight gain for the group recieving affection was 20 grams compared to the isolated group's average weight gain of 3 grams.

Conclusions/Discussion
My conclusion is that human affection has a positive affect both on the mice's performance in a maze and on growth.

Summary Statement
My project is about how human affection impacts mus musculus's performance while in a maze.

Help Received
I received help in the following areas: my neighbors helped design my board, take digital photographs; my parents paid for my project expenses which amounted to about $75, my dad helped me construct my wooden maze.