



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

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| Name(s) Joshua W. Grondalski | Project Number J0315 |
| Project Title Rat Craze | |
| Abstract Objectives/Goals Does the age of a rat determine how quickly it learns to run through a maze and improve its clocked running time each trial? Methods/Materials Three different age groups of rats were used. Two rats from the same litter were used for each age group. The age differences were approximately two to three months between groups. The group names were Adult, Teen and Child. The same maze and five maze designs were used from my 2002 Science Fair project so I could compare results. Each maze design had 20 turns and 10 dead ends. The start and finish for each maze was rotated so they were not located in the same spot for each maze. Special treats were placed at the finish line each trial run. I decided to have each rat have ten trials in each maze over a five day period. Each trial time was recorded in my log book Results The Teen group of rats had the fastest average time through the maze over all the others with a time of 40 seconds. The Child group had the second fastest time with 44 seconds. The Adult group had the slowest time with 53 seconds. Conclusions/Discussion I wanted to find out whether different aged rat groups ran through a maze at different average times. The Teen group was the fastest of all the rat groups. I thought the Adult group would be the fastest. They ended up the slowest only because they were very hesitant in the first run in the first maze. Once the Adults figured out what to do, they had the best time for mazes three and five and the second best time for maze four. There was only a 13 second difference between the fastest Teens and the slowest Adults. That is not a very large difference considering the difficulty in getting through the maze. Had the Adult group done better in their very first run, there would have been an even smaller difference in the three group's times. From the results of my project, I feel that there really is not a significant difference in the age of a rat and its ability to learn to run through a maze. | |
| Summary Statement Does the age of a rat determine how fast it can learn to run through a maze? | |
| Help Received Grandfather and Father helped create the maze; Mother helped with board and typing of the report | |