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|  | 1. Obtain a square wooden maze with a removable glass cover to be used as a means of testing the behavior of the mice. The glass cover must contain air holes so that the mice will be able to breathe. The interior of the maze should consist of wooden walls of varying lengths, and small sticks and rubber bands used as support for the walls.  2. Obtain proper "housing" for the mice. Three 18x18x12 inch glass cages should be used, along with straw for bedding, water bottles, exercise wheels, and two food dishes per cage. The mice should be kept inside so that they would be protected from excessively hot or cold weather and rain.  3. Buy mixed mouse food consisting of foods rich in fats, carbohydrates, and protein. The mice should be given about two tablespoons of this food each day.  4. Obtain twelve white, female feeder mice from a breeder. Females should be chosen to avoid any breeding, which may effect the results. Also, female mice are less territorial than males are.  5. Construct a chart with the names of each mouse and ten boxes next to each name, which should be filled in as tests were performed.  6. For each test, place a mouse at the starting point and close the plastic cover. The time it takes the mouse to reach the cheese should be timed and recorded on the data sheet. Take special note of any behavioral patterns of the mice as they went through the maze (ex: slow movement or rapid darting. stopping at certain points, etc.) This round of testing will allow the mice to serve as their own controls after they have been placed on their specific diets.  7. Repeat step six for all twelve mice ten days in a row between 9:00 and 10:00 p.m.  8. After the first series of tests had been completed, divide the mice into three categories of four mice each. The three categories are based on the type of diet the mice in the group are to be fed. These were carbohydrates, proteins, and fats.  9. The first group is to be  given a diet of mixed food  as well as foods with a high carbohydrate concentration.  Corn, alfalfa, and dried fruit  are recommended.  10. The second group is to  be put on a diet of mixed foods  as well as foods with a high  protein concentration. Lab  blocks, barley, dog food, and  dog biscuits are preferable.  11. The third group is to be  given a diet of mixed foods  and foods with a high fat concentration. Peanuts,  sunflowers, and assorted  nuts are recommended.  12. Give the mice one week to ten days to adjust to their new diet before beginning trial two.  13. After waiting for a week, resume testing. The second testing series should be done in the same manner the first, described in step seven, however the maze's pattern needs to be reversed. The pattern should be the exact same, yet opposite, as if it is being viewed in a mirror. This will ensure that the maze is of the same level of difficulty, yet different from trial one so that the mice will not remember it.  14. Record the results and note any observations in the behavior of the mice.  15. Average the times of the mice before and after their diets and compare the results. This will reveal which group has improved the most. Next, for each mouse, average the times from tests nine and ten of each trial, subtract from this the average of tests one and two. This will show how much the mice remembered as they progressed. |

*This Web Site is Best viewed with 256 or more colors.*

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