

# Lab Set up & Procedure

buttemer/schmied/reid 2015

**Purpose:** To observe, record, and analyze the wall-seeking behavior of mice

**Question:** Do Mice prefer walls, or edges?

## Materials for each lab station

- Female or male lab Mouse,
- copier paper box & lid materials for walls vs edges,
- grid w/six corridors drawn on it w/a diagonal line for walls vs edges trial,
- clock
- Nitrile gloves if desired
- disinfectant spray & paper towels

## Background:

Owners must be careful not to let pet mice escape. Pet mice that escape to the outside will almost always die quickly. Domestic mice do not know how to find food or shelter, and will usually be eaten by a predator, die of exposure, or starve to death soon. House mice don't have the survival skills of their wild relatives. If you cannot keep your mice any longer get someone to adopt, or return them to a pet shop.

**Safe handling of a mouse:** The safest way to pick up a mouse is to:

- grasp the BASE of its tail (not the tip) firmly,
- lift its bottom up slightly and
- slide your other hand under the mouse, palm upwards.
- Next lift your hand up with the mouse sitting on it, but keep hold of the tail unless you know the mouse is calm.
- **Caution:** Don't hold the mouse tightly around the body. This will scare & could hurt the mouse. *Also, you might get nipped!*
- **Caution:** Wild mice, especially males, can be much more aggressive. It is recommended that you do not attempt this lab with wild mice.

Holding the mouse by the base of the tail in this way is not uncomfortable for the mouse as long as you make sure the mouse's body is supported by your other hand. This will not upset the mouse.

Most pet mice will not jump from heights of more than a foot or so, but very nervous ones might - so keep a good grip on the tail until you're sure its safe to release the mouse.

## Procedure

**Wall/Edge Seeking Procedure:** The entire class completes a 10 minute spot behavior sample with 20 second observations simultaneously.

1. Assemble and properly arrange materials. For:

- Wallseeking – the 6 corridor grid goes inside the box - mouse goes on top of the grid.
- Edgeseeking – Box upside down. grid is taped to bottom of box. Mouse on top of grid
- Walls vs Edges – Box upside down. grid is taped to bottom of box. Construct 2 12" walls, tape to two adjoining sides of the box & together. Mouse on top of the grid. Number the grid corridors closest to the Edges as Edge 1, 2, 3, 4, 5, 6. Do the rest of the experiment with the same methods as stated above.

2. Select Timekeeper, Animal handler, Observer, and a Recorder. (Note: Animal Handler is in charge of cleaning up after the mouse at the end of the trial.)

3. Animal Handler carefully obtains a test mouse and places it on the grid. (see handling instructions!) The Animal Handler will sit quietly and be ready to pick up the mouse and return it to the grid if it jumps off the grid.

**Wait one minute and begin observations.**

4. At the Timekeeper's "Mark" the Observer conveys the Recorder the "corridor" (1-6) the head of the mouse is in **using hand signals**

5. The Recorder records the observations on the station's data table. Do observations for 10 minutes.

6. At the end of the test, the Animal Handler returns mouse back to its proper cage. Then clean the grid with disinfectant spray and dry the grid with a paper towel. Dispose of waste properly.

7. The Recorder enters station data on the class data table which will total all station data.

8. All students copy down the data on notes.

9. All: Bar graph the number of times the mouse is in each corridor on your graph in the following order:

- (1, 2, 3, 4, 5, & 6 ) Be sure to select the appropriate range, properly label each axis, create a legend, color the bars, and write the number of corridor occurrences atop the colored bar it represents.

10. Answer all analysis and conclusion questions.

11. If time, have a peer review your data.

**Note: Please be careful of the animals. Improper personal behavior and improper handling of Laboratory Animals is cause for removal from class. More importantly, it could result in the death of the study subject.**