**Mousetrap Car Project**

**Background:** The car works when one end of a string is tied to the arm on the mousetrap and the other end is wound around an axle. By winding the string around the axle the mousetrap's spring is stretched providing stored energy. As the mousetrap is released it pulls the string off of the axle causing the wheels to turn and making the car move.

**Objective:** The goal of the project is to increase your understanding of energy and momentum by building a mousetrap car to compete in class.

**Details:**

* Cars should be made by groups no larger than two
* Each car can be powered by 1 mousetrap that is provided in class, no rat traps or multiple mouse traps
* The race track will be the linoleum floor in school
* **The in class competition day will be your in class day the week of 4/5-4/8**

**Grading rubric:**

|  |  |
| --- | --- |
| Grade | Performance |
| 20/20 | >10 m |
| 19/20 | >9 m |
| 18/20 | >8 m |
| 17.5/20 | >7 m |
| 17/20 | >6 m |
| 16.5/20 | >5 m |
| 16/20 | >4 m |
| 15.5/20 | >3 m |
| 15/20 | >2 m |
| 14.5/20 | >1 m |

For your design grade your group must submit a written flow chart of design iterations (what design did you start with? What changes did you make? and why?)

**Final grade is 50% Performance and 50% Design**