

# Rat Trap Racer Project – Dec 2014



**GOAL:** To build a “vehicle” using a single rat trap as the only power source.

## I. Teams

Each team will consist of one or two individuals. (1 pt extra for alone)

## II. Rules

- 1) The Rat trap is your only source of power. No other springs, rubber bands, etc...  
(Rat traps are very dangerous so please **BE EXTREMELY CAREFUL!!!**)
- 2) The rat trap must be kept intact. You may drill to attach only, glue, tape or nail but no cutting the trap.
- 3) The vehicle must have wheels and remain in contact with the ground at all times.
- 4) The traveled distance will be measured from the starting line by Mr. Hughes room forward to where the vehicle stops or hits the wall.
- 5) The design must fit into a 12” X 12” X 24” box when loaded for the start.
- 6) All entries must be ready on race day 1 or will receive a 5 point penalty.

## III. Ideas

- 1) Don’t wait until the day/night before to build and test!!!!!!
- 2) Check out previous year’s vehicles on the website. Make sure the wheels are straight and move easily.
- 3) If the vehicle is too heavy, it will not move. If it is too light, it will not go in a straight line.
- 4) Try your idea at home or in the hallway after school before race day.
- 5) I do have materials such as balsa wood, CD’s, and tray’s. First come, first served.

## IV. Grading

This project will be part of your test grade and is worth 80 pts.

Workable Design	35 pts
Distance traveled	+1 pt for each 5 feet traveled
Research	10 pts
Project Report	20 pts (Website format add link to your homepage)

Be sure to include the following information in your web report: construction methods; discuss the success/failure of your tests; what worked in your design and what didn’t; would you make any changes in your design if you had to do this again; results of your runs; applications of Physics that were used in the design. Please include a link to your journal on your rat trap home page.

## V. Timeline

- Dec 1st – Project introduction, group choices, Rat traps handed out when ready
- Dec 8th – Research due
- Dec 16th and 17th – design and testing days
- Dec 18th and 19th – Race day
- Dec 23rd – Google website report due.

**Good luck and have fun, but be SAFE!!!!!!**