

# Rat Trap Racer Project – 2006



**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.

## 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, 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) All entries are subject to a safety check. Any entries deemed “unsafe” will be disqualified.
- 5) All entries are allowed only 2 runs as part of the project. The traveled distance will be measured from the starting line forward to where the vehicle stops or hits the wall.
- 6) The starting line will be at the doors by Mr. Hughes room.
- 7) The design must fit into a 12” X 12” X 24” box.
- 8) No commercially built cars may be entered, although materials commonly available may be used in the construction of the vehicle. If there is any question as to the validity of an entry, I will have the final say.

## 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.
- 3) Make sure the wheels are straight and move easily.
- 4) If the vehicle is too heavy, it will not move. If it is too light, it will not go in a straight line.
- 5) Try your idea at home or in the hallway after school before race day.
- 6) 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 lab grade and is worth 70 pts.

Workable Design	35 pts (5 pts extra credit for best design and fastest)
Distance traveled	1 pt for each 4 feet traveled (max of 30 pts)
Project Report	20 pts

The project report shall contain your construction method, results, improvements, problems, and the applications of Physics that are being used in designing this Rat Trap Racer.

## IV. Grading

This project will start when we complete Chapter 7. We will spend 2-3 days in class building and testing and 1 day racing. Race Day will be set once we begin the project and your vehicle must be ready to race on that day.

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