DISTANCE MOUSETRAP CAR

•**Objective:**

•Design and engineer a vehicle powered solely by the energy of one standard-sized VICTOR BRAND mousetrap, which will GO AS FAR AS POSSIBLE(the mouse trap must be a VICTOR or it will be -10)

Definition of car

•Note: By definition, a vehicle is a device with wheels or runners used to carry something (e.g., car, bus, bicycle or sled). Therefore, launching a ball (e.g., marble) from the mousetrap will be ruled illegal.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NO KITS\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Construction

      1. **The device must be powered by a single Victor brand mousetrap (1-3/4 inches x 3-7/8 inches).**

•2. The **mousetrap cannot be physically** altered except for the following: 4 holes can be drilled only to mount the mouse trap to the frame

•BUT IT CANNOT BE CUT! THE SPRING CAN ALSO NOT BE CUT, IT MUST REMAIN INTACT!

•3. The device cannot have any additional potential or kinetic energy at the start other than what can be stored in the mousetrap's spring itself. This also means that the student cannot push start the vehicle.).

•4. **All parts of the vehicle must remain with the vehicle as it travels down the track and stops.**

•5. T**he spring from the mousetrap cannot be altered or heat-treated.**

•6. The spring cannot be wound more than its normal travel distance, or 180 degrees.

•7. The vehicle must steer itself; no outside forces may be used to guide it.

•8. Vehicle must be self-starting and may not receive a push in the forward direction or side direction.

•9. The instructor has the final decision as to the appropriateness of any additional items, OR IF THE Material are from a kit, that might be used in the construction of the vehicle.

•GRADING

•CAR MEETS MINIMUM CRITERIA 50 POINTS

•CAR TRAVELS .1-20 feet 10 POINTS

•CAR TRAVELS 20-30 FEET 20 POINTS

•CAR TRAVELS 30-40 FEET 30 POINTS

•CAR TRAVELS 40- 50 FEET 40  POINTS

•CAR TRAVELS 50-60 FEET  45 POINTS

•CAR TRAVELS 60-70 FEET 50 POINTS

•CAR TRAVELS MORE THAN 70 FEET = 5 POINTS EXTRA CREDIT FOR EACH 10 FEET EXTRA.  IE  74’ = +5, 81 ‘ = +10 ETC

•TOTAL 100 POINTS

EXTRA CREDIT WILL BE AWARDED BASED ON THE DESIGN, NEATNESS AND APPEARANCE.