



Mousetrap Drag Race

Object:

To build a vehicle powered only by the single spring of a mousetrap that travels on the ground between two lines 10 meters apart in the shortest time.

Rules:

1. The car will be designed and built primarily by the student. All construction should be at a technical level commensurate with the abilities of a student in that age category.
2. The single spring from a standard mousetrap (not a rat trap) shall be the only power source. No extra springs, rubber bands, elastic, ramps, etc. are permissible as power sources. The spring is not required to be attached to its wooden backing. **Altering the original mouse trap spring to increase its power, such as winding it tighter, is an automatic disqualification.**
3. The mousetrap spring and any and all other devices needed to power and/or guide the car must be part of the car and must travel down the course with the car. The car must have at least three functional rolling wheels on the ground.
4. Any construction method or material is permissible as long as the rules are met.
5. Cars are to be assembled before arriving for contest finals.
6. Cars must run the course entirely under their own power. Once the car is in motion, contestants may not touch or steer their cars in any way.

Scoring:

Cars will be timed on a track 1 meter wide. The forward-most point of the car may be placed no further than 10 cm behind the electronic starting gate. As the car crosses the start line it will trigger the starting timer. The car will stop the timer as it crosses the finish line 10 meters away. The car with the lowest elapsed time is the winner.

Comments:

Adult supervision is encouraged throughout the project, especially before using knives or power tools.

Cars should be constructed appropriate to the age and ability level of the student. A 9-year-old, for example, would not be expected to use a metal lathe or perform silver soldering but she/he may use a scroll saw with adult supervision.

Multiple attempts within the time available will be permitted.

Selected Reading:

Usborne's Understanding Science: Machines, ISBN 0-7460-1962-9.

Design Technology: Children's Engineering, ISBN 1-85000-590-7.

Several excellent web sites are located on the Internet with tips and ideas for constructing mouse trap cars.