

Cowley Tiger Drag Racing

Mouse Trap Car Speed Contest

Objective:

Build a vehicle, powered solely by energy of one standard-sized mouse trap, (1 ¾" X 3 7/8"), that will travel a 5-meter linear distance in the shortest amount of time

By definition, a vehicle is a device with wheels or runners used to carry something, as a car, bus, bicycle, or sled. Therefore, launching a ball, such as a marble from the mousetrap will be ruled illegal.

Regulations:

1. Students must design and build their own vehicle which must be solely powered by a single Victor brand (or similar brand) mouse trap (1 3/4" X 3 7/8") and activated by tripping the original mousetrap trip mechanism. **Kits will not be allowed.**
2. 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 you cannot push start your vehicle.) Vehicles must be self-starting.
3. NO other energy source may be added.) e.g. CO2 Cartridge, batteries, elastic strings rubber bands, flexible extension rods, etc.)
4. The mousetrap cannot be physically altered except for the following: 4 holes can be drilled only to mount the mousetrap to the frame and the length of its lever arm may be adjusted as long as the mousetrap's spring has not been altered.
5. The springs on the mousetrap may NOT be cut, bent, over-wound, heat-treated or altered in any other manner. The length of its lever arm may be adjusted as long as the mousetrap's spring has not been altered.
6. The spring cannot be wound more than its normal travel distance or 180 degrees.
7. Vehicle must roll or coast along the track. All wheels must stay in contact with the surface of the track.
8. Car **must** be clearly labeled with student(s)' name, school, grade.
9. The vehicle must steer itself. Measurements of distance will not measure the total distance traveled only the displacement distance.
10. All pieces of the vehicle must stay attached and across the finish line. The mousetrap must be part of the vehicle.

11. Racers cannot receive a running start and front-most part of the vehicle must start as close as possible to the start line, Time of run will begin when any part of the vehicle passes over the start line and will end when that same point passes over the 5-meter mark.

12. The instructor has the final decision as to the appropriateness of any additional items that might be used in the construction of the vehicle.

Running the Contest:

13. The race track can be any smooth level floor, a gymnasium or a non-carpeted hallway.

14. The race track will be 5 meters long and both lanes will be 2 meters wide each. The vehicle must cross the finish line and stay within the race track in order to score a time.

15. Once the lever has been tripped, the student may not touch or otherwise interfere with the car.

16. Each contestant will race head to head against another mousetrap car. Times will be given to both cars. The lowest four times will have a tournament style head to head race off to determine the top three places.

17. Judges will initial cars at the specifications check. The same car must be used for all trails. Cars may be repaired or modified between trails for that car.

Awards:

18. Final Race off between the top four cars will be used to determine the top 3 places.