

THE GREAT MOUSE-TRAP CAR TRACTOR PULL

N. S. S. L.

OBJECTIVE

To Build a vehicle, powered solely by the energy of one (1) standard sized mouse trap (1 3/4" x 3 7/8") that will pull a weighted, wheeled sled a distance of 2 meters, or as close to that as possible.



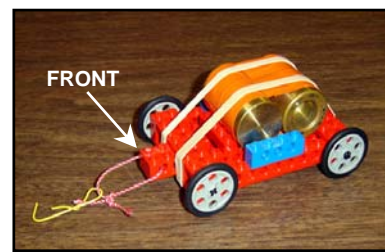
VEHICLE REGULATIONS

- ✓ The vehicle must be powered by only one standard Victor mousetrap.
- ✓ The vehicle must produce motion by a mousetrap connected to an axle that drives wheels. It may be directly connected to the axle, or indirectly via pulleys, gears, etc.
- ✓ The mousetrap cannot be physically altered. The only modifications allowed are
 - to the arm to increase the length of the lever arm
 - 4 holes can be drilled in the base of the mousetrap solely for the purpose of attaching it to the vehicle if needed.
- ✓ The spring mechanism may not be altered at all or heat-treated.
- ✓ The spring may not be wound more than its normal travel distance of 180 degrees.
- ✓ The spring cannot be disassembled and wound tighter than its standard amount.
- ✓ Vehicles must be self-starting, i.e. you cannot give them a push.
- ✓ Vehicles may not use any other type of kinetic or potential energy to produce motion (i.e. throwing stuff, magnets, weighting wheels, stomping, other springs, pushing, etc.)
- ✓ The car must have a hook or hole (see image) that will accept the hook that is attached to the sled. If it does not have a way to accept this, the sled cannot be hooked up and the vehicle will receive 0 points.
- ✓ The car must also have the team's name on it for ID.



THE SLED

- ✓ The sled will consist of a 4-wheeled cart holding (2) 200-gram masses in it. The sled will have a string that will allow it to be fastened to the vehicle.
- ✓ The total mass of the sled and weights will be ~450 grams.



THE COMPETITION

1. Vehicles will be checked and impounded prior to the event. Once vehicles are impounded, no more modifications are allowed.
2. The team member will wind the vehicle and attach the sled to the vehicle, and it will be positioned so that the front of the SLED is just behind the starting line, and held at rest by a team member.
3. The runner will say, READY-SET-GO, at which time the runner will start a stop watch(s) and the team member will simultaneously let go of the vehicle.
4. The vehicle will run and be timed until the front of the sled crosses the finish line (2-meters away), the vehicles stops forward motion and the wheels stop moving for 10 seconds, or 45 seconds pass, which ever comes first.
5. The distance the sled has traveled perpendicular to the start line will be measured, along with the time of the pull.

SCORING

- ✓ Scoring will be based on the NSSL 50 point system. The longest pull will receive 50 points, second longest 49 points, and so on. In the case of multiple full pulls or distance ties, the shortest time will prevail.
- ✓ If a vehicle fails to move from the starting line, the team will be allowed to reposition it ONCE and attempt to start it again (just in case it was set in a floor imperfection). If it fails to start the second time, it will receive a score of 15 for a NO PULL.

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