

SWSC Science 2011

Science Competition Title: Mousetrap Vehicle Competition

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Date Competition Rules were created: November 2010

Description and Rules for Competition:

The purpose of this project is to design and build a vehicle powered only by a single mousetrap spring that will travel **exactly 10 meters** in a straight line.

Design Rules:

1. All the energy to propel the vehicle must be provided solely by the single spring of a Victor Brand Mousetrap and the spring must be attached to the mousetrap. No elastic energy can be provided by the use of elastic string or flexible rods, sticks or rulers.
2. The spring must not be treated in any way.
3. All parts of the vehicle must travel with the vehicle. Nothing, including the mousetrap can fall off of the vehicle, nor can anything be projected from the vehicle while it is being tested. The mousetrap must be part of the vehicle.
4. The vehicle must remain in contact with the floor at all times. No catapult systems allowed.
5. The mousetrap vehicle must have at least two wheels that touch the ground.
6. No limitations are placed on the size, mass or shape of the vehicle. Any materials, except those specifically mentioned above, may be used in the vehicle's construction.
7. All mousetrap vehicles need to be checked in at the beginning of the day.

How Scoring will be performed:

1. Each mousetrap vehicle will be released from rest with its front wheel on the starting line. There will be a finish line marked 10 meters from the starting line.

2. After the vehicle has stopped, the distance from the front wheels to the finish line will be measured and recorded.
3. Each mousetrap vehicle will be allowed to run twice, with the score determined by the better of the two trials.
4. No one is allowed to touch or influence the motion of the vehicle after it is released. The vehicle must move under its own power.
5. The winner of the competition will be the vehicle that stopped the closest to the finish line in its best trial.

How Tie-Breaker will be performed (if needed):

A tie will result if two or more vehicles travel the same distance in their best trial. The tie will be broken based on the results of the vehicles' second trial. The tied vehicle that has the best result for its second trial will be the winner.

Number of students allowed in each individual team:

A mousetrap vehicle can be brought by a team of two students or an individual student.

Number of teams allowed to compete from each individual school:

Each school can have a maximum of two mousetrap vehicles compete.