

Mousetrap Cars!

Objective: You, the student, will be designing a car that is powered by a mousetrap. There are 4 categories to compete in. They are: fastest, longest distance, most unique design for propulsion, and cutest. You will also need to be able to explain Newton's Laws along with certain vocabulary words and how they apply to your car.

Mousetrap car specifications

1. The main source of stored energy for propulsion is one standard size mousetrap. NO RAT TRAPS!
2. The mousetrap spring may be modified, but may not be subjected to any heat process.
3. Any or all parts of the mousetrap may be used in the design, but the mousetrap spring (if used) must be permanently attached to the vehicle.
4. The vehicle must ride on hand-made wheels and remain in contact with the surface at all times. No flying projectiles allowed!
5. Wheels may be made of any material. You may use items that are from products which are round but not manufactured to be wheels. Examples: buttons, door knobs, records, etc. NO manufactured wheels are allowed. You CAN NOT take wheels off a toy car.
6. The vehicle must be able to be reusable for several trials.
7. The designer must start the vehicle from the starting area without the aid of a backstop. No push or pull starts will be allowed.
8. Rubber bands may not be used as part of the string from the lever to the axle. They may be used on wheels for added traction.
9. The lever must not bend.
10. Your name must be permanently marked on your car! Put your class period on your car.
11. You will be asked to give an oral discussion on your car on the day it is due. A worksheet to help you do this will be provided.
12. The grading sheet for this project is on the back side of this form.

Name_____

**Mousetrap car Performance
Assessment**

_____(10) Car has student **name** clearly marked in permanent ink.

_____(10) Mousetrap car is powered with **one mousetrap**.

_____(10) **Distance:** Must travel forward
0 = 0 points
0.1-6 inches = 3 points
6.1-12 inches = 7 points
12.1+ inches = 10 points
-2 points if the car goes backwards

_____(10) Wheels: not real wheels.

Concept word #1

_____(10) Definition _____

_____(10) How it relates to your car?

Concept word #2

_____(10) Definition _____

_____(10) How it relates to your car?

Newton's Law: _____

_____(10) Explanation of law

_____(10) Application to your car?

_____/ (100) Total

Name_____

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