

Mouse Trap Car

By: <Student Name>



Self-Locomotion

Self-Locomotion is something that moves on its own with no outside help. The means of transportation travels with the car. In this case, our car moves with the mouse trap.



Our Design

We made a mouse trap car. We glued a stick on the trigger bar of the mouse trap. Then we tied a string around the stick and wrapped it around the back axel. When the mouse trap snaps, the string unravels from the axel making the car move.



Project Development

1. We took apart our car so that we were able to access the axels better.
2. Then, we drilled a small hole in the dowel a few centimeters deep.
3. We cut off part of the trigger bar, and slide the dowel onto the metal bar.
4. Then, we tied the string to the back axel as well as the top of the dowel.
5. Next, we glued the mouse trap to the hood of the car.
6. To make the car go within the speed limit, we added rocks to the inside.
7. We then wound the string around the axel so it was tight.
8. Lastly, we pulled back the dowel and let it go. This made the dowel pull the string, unraveling it, creating movement in the back wheels pushing the car forward.

Velocity

Velocity is speed in a given direction.



QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

Distance = 1.00 meter
Time ≈ 2.91 Seconds

$$V = D \div T$$
$$V = 1.00 \text{ meters} \div 2.91 \text{ seconds}$$
$$V \approx .344 \text{ meters per second}$$

Acceleration

Acceleration is change in velocity with time.

$$A = \Delta V \div \Delta T$$

$$\Delta V \approx .344 \text{ meters}$$

$$\Delta T \approx 2.91 \text{ seconds}$$

$$A = .344 \text{ meters} \div 2.91 \text{ seconds}$$

$$A \approx .128 \text{ meters per second}$$

