

Mouse trap car essay



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I think that it will go far because of how hard I worked on it, and how far it went when I practiced with it at my house. Also, the different elements I put in it to help it go will affect its distance. The next few paragraphs will explain the different physics topics that I learned about that I incorporated into my mouse trap car. Scalars and vectors have a lot to do with different components of my mouse trap car. Scalars are quantities that are fully described by a magnitude, and a vector is a quantity that is fully described by both a magnitude and a direction. My car gets measured for how far it goes, which is distance.

Distance itself is a scalar. Another scalar that is involved with my car is the speed of my car. A vector that has to do with my mouse trap car is displacement which is a change in position of an object, which goes with my car since it moves from one spot to another. More vectors that are incorporated into my car are velocity and acceleration. Distance is how far the car would go and displacement is the final point an object is at minus the initial point. If my car traveled 5.5 meters, but then rolled back 2.3 meters it would affect how far it went for the distance, and displacement.

For displacement you would subtract the two, and for distance you would add them. If you were required to travel 100 mm forward down the hall, and then turn left and travel 50 mm, for distance you would add it. Another topic that has to do with my car is velocity and acceleration. Velocity is the measurement of the rate at which an object changes its position and acceleration is the change in velocity. Acceleration relates to my car because when it goes it will be accelerating. If it goes forward or backwards, that's acceleration and if it turns left or right, that is still acceleration.

Also, whenever my car moves that is velocity because the car is changing its position. The last topic that my Christmas mouse trap car related to in physics would be the three laws of motion. The first law of motion has to do with mass and inertia. Inertia is the natural tendency of an object to stay at rest or in constant motion along a straight line, and the mass of an object is really just a measurement of its inertia. The mass of my car affected how far and how fast it will go. The more mass my car has the slower it will go. Newton's second law of motion is force equals mass multiplied by acceleration.

This equation has both direct and inverse relationships. A direct relationship is one one increases, the other increases when one decreases, the other decreases. An inverse relationship is when one increases, the other decreases. A inverse relationship with my car would be when mass increased, acceleration decreased. The action and reaction forces between the ground and the wheels was the same amount of force that the wheels were pushing towards the ground, the ground was pushing towards the wheels. Another action and reaction force on my car was with the force of the string and the wheels.

The string was pulling the car forward, and pushing the wheels forward, the wheels were pushing backwards. To find my car's weight in Newton's I would multiply the mass and acceleration of the car. The force vectors on my very nicely decorated vehicle while in motion would be a pull force which is gravity, and the action and reaction force of acceleration, and the normal force of the car. The purpose of this paragraph was to explain the different

physics subjects that went along with my mouse trap car. There were many different topics that went along with my making the mouse trap car