1. What are the two types of friction that affect the performance of your vehicle?



1a.unfortunetly our car was unable to move due to the mouse trap not working properly and our car being bent but if the trap worked the way it was supposed to and our car was more sturdy it would stand a better chance with force against the mousetrap pulling the string, the two types of friction that would have affected the performance would have been static and kinetic.

1. What problems related to friction did you encounter and how did you solve them?

2a.our car did not move so there were no results.

1. What factors did you consider to decide the number of wheels you chose in your design?

3a. doing the researched I discovered 3 wheels would lead to a better chance of the car moving faster also leaving a bigger distance between the start and the end, but after creating this car I soon learned that 4 wheels would have made the car sturdier and would have worked a lot better.

1. What kind of wheels did you use in each axle? What is the effect of using large or small wheels?  
   4a. when designing the car, we used the same size wheels for each one (large wheels) for all of the axels for the vehicle, however it is suggested that a small wheel and two large wheels would have worked better, they resemble olden day cars
2. Explain how Newton's first, second and third laws apply to the performance of your vehicle.

1. Discuss the effect of the length of the lever arm in the pulling force of your vehicle.  
   6a. on our mouse trap our lever was much shorter than some which resulted in us not having a lot of room to pull back on leaving us with an unpredictable chance.
2. Discuss the types of energy transformations that occur in your car.
3. List the energy types that are wasted in your car.
4. Discuss how you increased the efficiency of your vehicle (reduced the wasted output energy).

9a. our base was to thin and it bent very easily, so if we had made the base more thick or even used a small wooden plank it would have increased the efficiency.