**Abstract**

What I want to find out in my Science Fair project is whether tracks or wheels on a robot are better for traversing different kinds of terrain. The design of my Science Fair experiment will be as follows: I will have built a Lego Mindstorms robot and set it to go a certain distance. Then I will place it on a carpeted surface with tracks as its way of locomotion, and time how long it takes to go that distance. Then I will change the tracks to wheels, and then see how long it takes to go that same distance with wheels. I will record both of these, and then go through the procedure again with three other surfaces -- wooden floor, bumpy grass, and a metal ramp. I will record the time of each, and then see whether tracks or wheels are better for each surface, and which is better on more surfaces, making it better overall. From my experiment with Lego Mindstorm robots, it can be concluded that for robots that are going to be traveling over carpeted areas, tracks are better, because when I drove the robot over the same distance on carpet with tracks and wheels, it was somewhat faster with the tracks, as can be seen in my graph. It can be concluded that for robots that are going to be traveling over areas made of smooth wood (wood floor), tracks are better, because when I drove a robot the same distance using tracks and wheels, the tracks were faster, as you can see in my graph. It can be concluded that for robots that are going to be traveling over grassy, hummocky areas, tracks are much better, because the tracks could drive over the grass fine, but the wheels did not get enough traction to get it anywhere. It can be concluded, that tracks are better for going up ramps, because when I used tracks to get the robot up the ramp, it worked, but with the wheels it didn’t make it all the way up.