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October 28, 2016  
Period 9

Dear Sir Isaac Newton,

Today I will be demonstrating, examples on everyday life of all three of your laws. I will also be talking about some examples based on my life too. But of course this note is for you, so I will talk about some things if you have remembered about them. Like  $F=MA$ . Remember that? Well you will don't worry.

Your laws are used everyday, and very helpful to use, important as well. Anyway your first law "Newton's first law of motion" also known as "the law of inertia" if I'm correct, states that an object at rest will remain at rest. Also an object in motion will stay in motion with the same speed and direction unless acted upon by an unbalanced force. We use this law everyday, I'll give you two examples, so if you slide a hockey puck on ice, eventually it will pstop because of the friction on the ice. It is also possible to stop if hits something for example a player's stick. Another example is if you kicked a ball into space, the ball would keep going forever because of course in space there is no gravity, also there is no friction going against it.

Your second law of motion is also important and helpful to use. According to Newton's second law of motion acceleration is produced when force acts on mass. The greater the mass the greater the amount of force is needed to accelerate the object. This law is used everyday in my life, I will demonstrate you two examples, before that, the second law gives us an exact relationship between force, mass, and acceleration. It can be expressed as a mathematical equation for example,  $F=MA$ , or force equals MASS times ACCELERATION. Now let's begin the examples before I forget. For example if you use the same force to push a truck and push a car, the car will have more acceleration than the truck because it has less mass than the truck.

Your third law of motion that you invented, which is one of my favorites, states that for every action there is an equal and also an opposite action. In other words this also means that in every interaction, there is a pair of forces acting on the two interacting objects. I've used this law almost everyday in life I'll give you an example. So let's use this as an example, you probably know the earth pulls down on you. What you might not realize is that you are also pulling down on earth. We all are actually. Ok so this is the example, if the earth is pulling down on you with a gravitational force of 500N. Well guess what? You are also pulling down on the earth with a gravitational force of 500N.

In conclusion, thanks to you I have learned all your motion laws and how they work, what they mean as well. Thank you so much for inventing these laws. I have used them everyday. And have learned at least a thing or two about them. Thanks for reading my note.

Yours truly,  
Julian

