

Dear Sir Isaac Newton,

My name is Aidan Green, and I am in 7th grade at GBMS. I'm in science class, and we are studying Physics, and are talking about Force and Motion. Of course, as we are exploring this topic, your name comes up a lot. You seem to be the one who came up with a lot of the answers about how force and motion work! I find it pretty amazing that one guy can figure so much about the world. The explanation that you came up with explain so many things that happen in our world every day! I'm going to try to put your laws into my own words, and give some examples of how I see them in the world every day.

Your first Law states that an object in motion tends to stay in motion, an object at rest tends to stay at rest, unless acted upon by an external force. Seemed confusing at first, but I think it basically means that objects tend to keep doing what they are doing, unless something makes it change. The first thing that I think of if when I'm in bed. If I'm resting, I tend to stay resting. Then my mom comes in, the external force. She makes me get in motion, then I stay in motion! Another example would be if someone is sitting on a swing. They will stay still unless they either push with their feet or someone pushes them.

Moving on to your 2nd Law, which says The acceleration of an object equals the net force acting on the object divided by the object's mass. That's one made less sense to me, but maybe can be reworded to say that a heavier object requires more force to move the same distance as lighter objects. I do something called stage crew, and this is obvious all of the time. Running crew moves sets. Larger sets are harder to move, smaller sets easier to move, that's because of the difference in their mass. So, for the bigger ones we either push harder, put more crew kids on a set, or get a stronger or bigger crew kids.

Your 3rd Law says that for every action there is an equal and opposite reaction. In other words, whenever an object pushes another object it gets pushed back in the opposite direction equally hard. For example, when I go ice skating, if I push against a wall, I go pretty quickly backwards. If I didn't have the skates on, it would take more force to move me. So there is a difference in the reaction. Also, when air comes out of a balloon, the air rushes down, the balloon goes up.

So, dude, you're pretty awesome. These laws affect everybody every day. Without your explanations, we wouldn't know why things work the way they do. These laws were the basis for a lot of other things that people have discovered. If you hadn't figured out

these 3 laws, who knows how long it would have taken someone else to come up with these theories. I wonder if you were alive today if you would think it was cool that people are still talking about your discoveries!