

Why is it important to understand physics if you are designing a rollercoaster?

I think it is important to understand physics to figure out motion of a roller coaster. Before the roller coaster starts, it has potential energy if it is high up. Once the roller coaster starts moving, it has kinetic energy. Potential energy become kinetic energy, once it starts getting faster. When the roller coaster is moving down, it has a gravitational pull. When you are in a loop, gravity helps it move. Without gravity it would make it impossible to make it over. It is important to understand this because if you didn't have Newton's First Law then roller coasters would not work, and who doesn't like a fun roller coaster?

If you understand physics and you are building a roller coaster, then yours will be safer than someone who doesn't know Newton's First Law. If you didn't have friction the your roller coaster ride would not stop because brakes need friction. The reason you wear seatbelts is that you would keep on going till you hit something. This applies to Newton's First Law. It is really important to have a safe roller coaster. All these things are also way more important than you think!