Newton's Laws

Isaac Newton was a seventeenth scientist who described how things move in the physical universe. We call these descriptions Newton's Laws of Motion because they apply in the same way at all times for all objects on Earth.

Newton's laws center around a few key concepts. ***Force*** is something that pushes or pulls an object. Force can move, stop, speed up, or slow down and object. it can also change its shape. The world is full of forces, and every force acts on all objects. The most ubiquitous force on Earth is gravity, which is a force which pulls objects towards themselves. Earth's gravitational force is what keeps things on earth touching the ground. Another key concept, ***direction***, refers to how an object moves when a force is applied to it. ***Strength*** refers to how a force is exerted. The stronger the force, the farther an object will move. ***Acceleration*** refers to a change in velocity. ***Velocity*** is a combination of speed and direction. When acceleration and velocity are going in the same direction, an object speeds up. When acceleration and velocity are opposed, an object slows down.

Newton's First Law of Motion is also known as the Law of Inertia. Inertia is resistance to a change in motion. Newton's first law says that an object that is not moving (at rest) tends to stay at rest, and an object in motion tends to stay in motion.

Newton's Second Law of Motion says that the greater an object's mass, the more force is needed to accelerate it.

Newton's Third Law of Motion says that for every force acting on an object (called an ***action***), there is an equal and opposite reaction.

Question: Newton's Laws

1. Write a brief definition for each term.

force _____

direction _____

strength _____

acceleration _____

velocity _____

action _____

2. What are Newton's three Laws of Motion:

First Law _____

_____

Second Law _____

_____

Third Law _____

_____