Understanding Motion & Forces

Newton's First Law

An object at rest will remain at rest unless acted on by an unbalanced force. An object in motion continues in motion with the same speed and in the same direction unless acted upon by an unbalanced force.

This law is often called **"the law of inertia"**.

Newton's Second Law

Acceleration is produced when a force acts on a mass. The greater the mass (of the object being accelerated) the greater the amount of force needed (to accelerate the object).

This means the heavier an object, the more force you need to move it.

Newton's Third Law

For every action there is an equal and opposite re-action.

Basic Forces Relating to Motion

Gravity	Friction
attracts all objects in the universe to one another	when matter moves or tries to move across or through other matter

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What causes falling objects to speed up as they fall? _____

What causes moving things to slow down? _____

Which law explains a ball bouncing off a wall? 1st 2nd 3rd

Which law explains that a golf ball and a bowling ball hit with the same force will not go the same distance? 1st 2nd 3rd

Which law explains why you should wear your seat belt? 1st 2nd 3rd