

Newton's laws

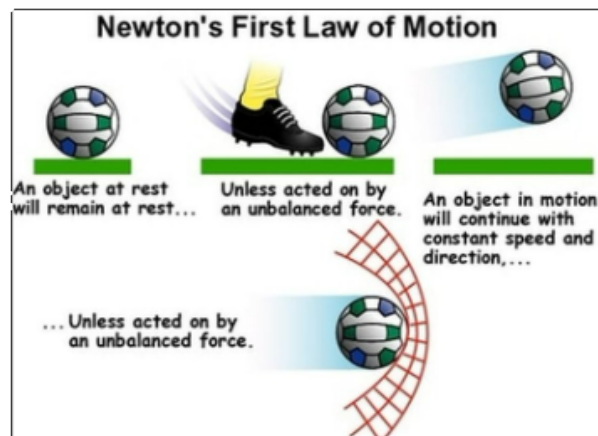


Newton's First Law

[Newton's first law of motion | Forces and Newton's laws of motion | Physics | Khan Academy - YouTube](#)



An object in motion tends to stay in motion while an object at rest tends to stay at rest unless acted on by some force. This is Inertia

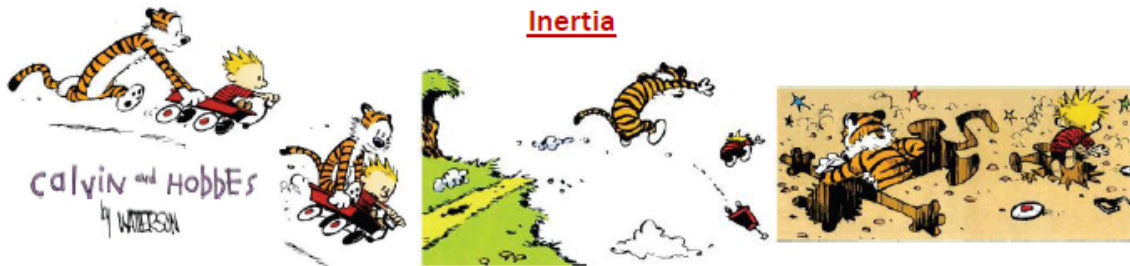


Newton's first law of motion states that an object won't move by itself and that, once in motion, it won't stop unless some force acts upon it.

Example ^{1st law}
-Ball on a table will not move

3 Types of Inertia

1. Inertia of rest: The inability of a body to change by itself its state of rest is called inertia of rest.
2. Inertia of direction: The inability of a body to change by itself its direction of motion.
3. Inertia of motion: The inability of the body to change by itself its state of motion is called inertia of motion.





Why did Calvin, Hobbes and the cart continue to move forward when they fell off the cliff?

<p>All objects have this tendency to oppose any change in motion.</p> <p>A Body with Mass.</p>	<p>If it is stationary, it likes to remain stationary.</p>	<p>If it is moving, it likes to remain moving.</p>
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This tendency is called the inertia of an object.

Inertia is the tendency of an object to remain in its state of rest or constant speed in a straight line.

Imagine a stationary pebble and a stationary large rock. Which do you think is easier for you to move?

<input type="checkbox"/> Stationary pebble 	<input type="checkbox"/> Stationary large rock 
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If the pebble and the large rock are both moving, which do you think is easier for you to stop?

<input type="checkbox"/> Moving pebble 	<input type="checkbox"/> Moving large rock 
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An object with smaller mass is easier to move and easier to stop. An object of smaller mass has smaller inertia.

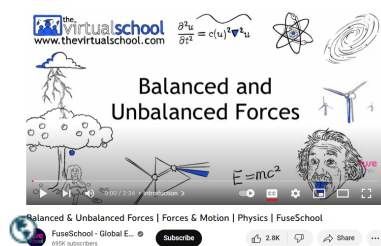
**The inertia of an object depends on its mass.
A bigger mass has greater inertia.**

By Esther

Newton's 2nd Law of Motion

Newton's second law of motion for kids straightforwardly states that the rate of momentum is directly and proportional to the force applied to the object and takes place in the direction in which force is applied.

-add force moves farther



Newton's second law states that when you push an object with more force it will move faster and farther away.

Attachments

BillNyetheScienceGuy - MAGNETISM WS.doc

BillNyetheScienceGuy - ENERGY WS.doc

BillNyetheScienceGuy - GRAVITY Ws.doc