

# Lettergram.Net – Newton's Three Laws

This document covers Newton's three basic laws that all physics classes will use, this will however not cover the equations and such, only the ideas Newton presented with examples the reader should be able to understand.

1) If an object does not interact with any other objects (or net force), it is possible to identify a reference frame in which the object has zero acceleration. In common terms:

Every body persists in a state of uniformity unless compelled to change that state by a net force being impressed on it.

Example of Newton's First Law – Look around you, anything that is not moving has no net force, meaning there is no net force being impressed upon it.

$$2) \sum F \vec{=} ma \vec{}$$

Example of Newton's Second Law – Go ahead and push an object near by, notice how you have caused an acceleration to the object (you made it move from rest). That means that in turn you have moved that mass through some distance, which is defined as a force. The direction that you pushed the object was also the same direction which the force was applied. Seems obvious, but there you have it.

3) To every action there is an equal, but opposite reaction. That is, if an object exerts a force on another, the force on both objects is equivalent.

Example of Newton's Third Law - Go ahead and quickly move both hands together and clap, when that happens both hands come to a quick stop and there is no more movement. This is an example of Newton's third law. Both hands cease movement because both hands are applying the same force towards one another which cancel each other out. If you do not understand this concept please revisit a video or notes on vectors.

***Recommendations:***

Because I do not know the specific knowledge each individual has using this guide, I would recommend that if there is something I mention that you do not fully understand you either use [YouTube](#) to find a video; Tweet me via [Twitter](#) \*(though I may be a while getting back); Comment on the related post on [Lettergram.net](#) or simply ask your teacher.