# Introduction to Newton’s Laws of Motion

Physics is the study of matter, energy, and the interactions between them. In this lesson, we’ll explore **Newton’s Laws of Motion**.

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## Newton’s First Law

An object at rest stays at rest and an object in motion stays in motion unless acted upon by an external force.

* Also known as the **Law of Inertia**.
* Example: A book on a table remains at rest unless pushed.

## Newton’s Second Law

Newton’s Second Law relates force, mass, and acceleration:

Where: - = Force (Newtons) - = Mass (kg) - = Acceleration ()

**Example Calculation:**