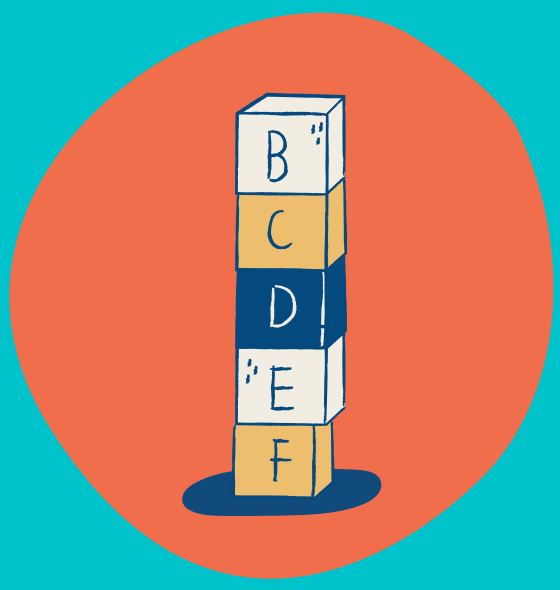
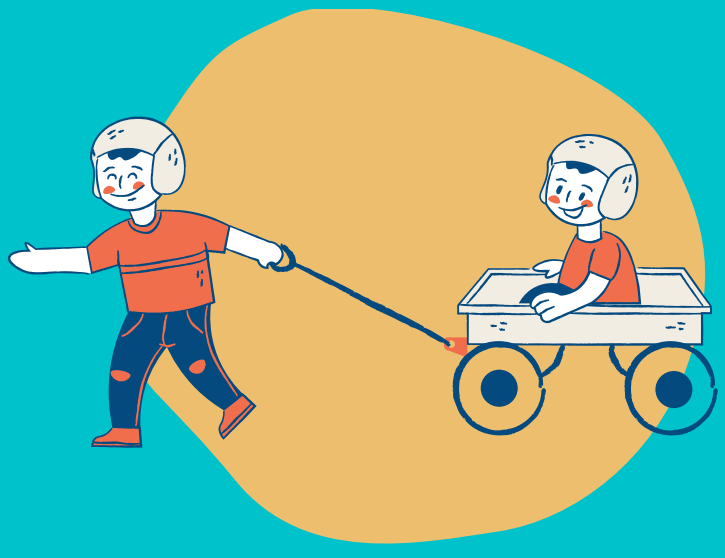
Newton's Laws of Motion

First Law of Motion

The first law or 'law of inertia' postulates that if a body is at rest or moving in a straight line, it will remain at rest or remain moving in that same direction unless it is acted upon by an outside force.





Second Law of Motion

Newton's second law states that the momentum of a body is equal to the product of its velocity and mass. It also states that the time rate of change of this momentum is equal in both magnitude and direction to the force imposed upon it.

Third Law of Motion

Also known as the 'law of action and reaction,' the third law states that when two bodies interact, the force they apply to each other is equal in magnitude and opposite in direction.

The Scientific Revolution

Newton's publication of Principia and his presentation of the laws of motion form part of other major discoveries of his time. The Scientific Revolution includes discoveries in science from Nicolaus Copernicus, Galileo Galilei, Johannes Kepler, and Rene Descartes.

Did You Know?

In the 20th century, quantum mechanics and relativity replaced Newton's laws of motion to account for the behavior of minute bodies like electrons or bodies that move closer to the speed of light.

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HTTPS://WWW.BRITANNICA.COM/SCIENCE/NEWTONS-LAWS-OF-MOTION