July 15, 2023

Introduction (1 minute)

- Overview of Newton's 3 laws
- What will be covered in the presentation

Newton's First Law of Motion (2 minutes)

- Definition of Newton's First Law: Objects at rest remain at rest or in uniform motion
- Law of inertia: An object will remain at rest or move in a straight line with a constant velocity unless acted on by an external force
- Force in Newton's first law: Force is an external influence that changes the state of motion of an object
- Examples of Newton's first law: A ball rolling down a hill, a car moving at a constant speed, a book remaining at rest on a table

Newton's Second Law of Motion (3 minutes)

- Definition of Newton's Second Law: Force, mass and acceleration are related by the equation $F = ma$
- Force: An external influence that changes the state of motion of an object
- Mass: The amount of matter in an object
- Acceleration: A change in velocity over time
- Examples of Newton's second law: A car accelerating, a rocket being launched, a person pushing a box

Newton's Third Law of Motion (2 minutes)

- Definition of Newton's Third Law: For every action, there is an equal and opposite reaction
- Examples of Newton's third law: A person pushing a wall, a rocket being launched, a person jumping off a diving board

Conclusion (1 minute)

- Overview of Newton's 3 laws
- Summary of what was discussed