

## Objective

By the end of this lesson, you will understand the basic principles of physics and how they relate to the game Roblox.

## Materials and Prep

- Computer with internet access
- Roblox account
- Notebook and pen/pencil

No prior knowledge of physics is required for this lesson.

## Activities

1. Research and identify different physics concepts commonly used in Roblox. Examples include gravity, momentum, and collisions.
2. Play a Roblox game that involves physics elements. Take note of how these elements are implemented and how they affect gameplay.
3. Create your own Roblox game that incorporates at least one physics concept. Experiment with different settings and variables to observe the impact on gameplay.
4. Reflect on your experience and write a short paragraph explaining the importance of understanding physics in game development.

## Eighth Grade Talking Points

- "Physics is the branch of science that deals with the properties of matter and energy."
- "In Roblox, physics is used to simulate real-world interactions and make the game more realistic and immersive."
- "Gravity is a fundamental physics concept that determines how objects are pulled towards the center of the Earth. It affects how characters and objects move in Roblox."
- "Momentum is the product of an object's mass and velocity. In Roblox, momentum is important for calculating the movement of characters and objects."
- "Collisions occur when two or more objects come into contact with each other. In Roblox, collisions are used to detect when characters bump into walls or other objects."
- "Understanding physics in game development is crucial because it allows developers to create realistic and engaging experiences for players."