Objective

By the end of this lesson, you will understand the basics of physics through the lens of Roblox game mechanics.

Materials and Prep

- Computer with Roblox installed
- Access to a Roblox account
- Pen and paper for notes

No prior knowledge of physics required, just your enthusiasm for Roblox!

Activities

- **Activity 1: Observe and Analyze**
  Explore a few Roblox games of your choice and observe how objects move and interact within the game world. Take notes on what you notice.
- **Activity 2: Build and Test**
  Create a simple game in Roblox Studio where you can experiment with gravity, friction, and other physics concepts. Test different settings and see how they affect gameplay.
- **Activity 3: Research and Present**
  Research how real-world physics concepts like momentum or acceleration are implemented in game development. Create a short presentation to share your findings.

Talking Points

- **Gravity in Roblox:**
  "In Roblox, gravity pulls objects down, just like in real life. This is why your character falls back to the ground when you jump."
- **Friction and Movement:**
  "Friction in Roblox affects how objects slide or stop moving. It's like trying to walk on ice versus walking on grass."
- **Velocity and Speed:**
  "Velocity is how fast an object is moving in a specific direction. In Roblox, you can change the speed of objects to create different effects."
- **Action and Reaction:**
  "For every action in Roblox, there is a reaction. This means that when you push an object, it pushes back with equal force."