

Name _____

Action and Reaction

Newton's Third Law of Motion tells us that for every action, there is an equal and opposite reaction. This law explains why things move when we interact with them. Every time you step on the ground, the ground pushes your foot back up with an equal force, allowing you to walk.

Example: Think about a bouncing ball. When you drop it, it hits the ground and bounces back up because the ground exerts an equal and opposite force, following Newton's Third Law.

Real-world application: When you jump off a swing, you push the swing backward, and it pushes you forward. This action-reaction pair of forces is what makes swinging and jumping so much fun.

Questions

1. What does Newton's Third Law of Motion state?
2. Explain the concept of "action-reaction" in this law.
3. How does this law apply to bouncing a ball?
4. Why do you move forward when you jump off a swing?
5. Provide another example from everyday life where action and reaction are at play.

