

Momentum Measure™

Lesson Directions Overview

Equipment List

- 6 Tennis Balls
- 6 Basketballs
- 6 Smash™ Balls
- 6 Yardsticks
- 1 Storage Bag

Learning Objectives

1. Describe what happens when two objects collide using relevant vocabulary like motion, force, energy, and speed.
2. Measure the bounce height of balls in different sizes after they are dropped.
3. Apply Newton's Laws to explain the motion of colliding objects.
4. Observe how the mass of an object affects the outcome of a collision.
5. Define and calculate for momentum.

Grade Levels: 3-12

Vocabulary Covered

- Force
- Motion
- Energy
- Collision
- Speed
- Velocity
- Acceleration
- Mass
- Newton's 1st Law
- Newton's 2nd Law
- Newton's 3rd Law
- Inertia
- Momentum
- Law of Conservation of Momentum
- Potential Energy
- Kinetic Energy

Next Generation Science Standards

- 3-PS2-1
- 3-PS2-2
- 4-PS3-1
- 4-PS3-3
- MS-PS2-1
- MS-PS2-2
- MS-PS3-1
- MS-PS3-5
- HS-PS2-1
- HS-PS2-2
- HS-PS3-2

Common Core State Standards for Mathematics

- 3.MD.B.4
- 4.MD.A.1
- 5.MD.A.1
- 6.EE.B.6
- 6.EE.C.9
- 7.EE.B.4
- 8.EE.A.1-4
- 8.SP.A.1-4
- HSA.CED.A.1
- HSA.REI.B.3