This popular toy is called a Newton’s cradle. What happens when you lift up and release one of the balls at the end?

**Answer**

Pull out a ball on one end and release it, and another will pop off at the opposite end. If you pull two to the side and release them, two will pop out at the other end. Can the balls count?

The collision between two bodies where relatively large forces act during a very short interval of time is called an impact. When the highly elastic steel balls collide, they exchange velocities. Faster than the eye can follow, the energy of the impact is passed along to each neighboring ball, and the ball on the end receives that energy and swings into the air.

The effect is the same regardless of the number of balls that are released. The toy demonstrates Newton's third law of motion: To every action there is always an equal and opposite reaction.