

Newton's Cradle

The Newton's Cradle is a desk toy named by one of the most important scientists, Sir Isaac Newton. It demonstrates the scientific idea of momentum and the principal of conservation of momentum in impacts (also called collisions) by moving one ball at the end at a certain height and letting go to hit the other balls. Momentum can be defined as a "mass in motion" and it measures the motion of an object. As an object with a certain mass moves at greater velocities it has greater momentum or you can compare two objects of different masses moving at the same velocity, the object that has greater mass will have a greater momentum. For example, if Ball A has a mass of 10 lbs and Ball B has a mass of 20 lbs, and both balls are moving at 10 mph, Ball B will have a greater momentum than Ball A. The equation for momentum is:

$$\text{Momentum} = \text{Mass} \times \text{Velocity}$$

