Suspended Collision Balls

 Conservation of momentum can be demonstrated simply by pulling various numbers of balls back from equilibrium and allowing them to swing back towards equilibrium. Momentum conservation is demonstrated by the fact that the number of balls that collide with the set of resting balls determines the number of balls that are knocked of the other side of the stack. That is, since the balls all have the same mass and the collisions are nearly elastic, the only way to conserve momentum and energy is to have the same number of balls (amount of mass) at the same velocity leave the collision as enter it.