

Conservation of Linear Momentum



The Executive's Desk Toy



The Astro Blaster!

Purpose: Demonstrates the conservation of linear momentum during collisions.

These two toys show how momentum is conserved, without the bother and noise of setting up air tracks. They are fun, too. The first, “Newton’s cradle”, has been around forever and (supposedly) adorns the desks of all CEO’s. The second is the new “Astro Blaster”, and (according to the back of the package) illustrates how a supernova works!

Note: Despite being around for so long, the Newton’s cradle is still a good demonstration – n balls go in and n come out of the collision. You can send them in from left, right, or from both directions simultaneously.

The Astro Blaster works along the same lines: the three large balls are constrained together, while the small red ball on top is free to leave the system. When you drop the blaster (large ball down) it bounces and momentum is transferred to the red ball, which then flies off like a shot since its mass is small.

Extra Equipment: None.

Location: Shelf A2.