

Colliding Objects Lab

For every action, there is always a reaction. A force is created that



acts on both of the colliding objects. (Newton's third law.)

What You Need:

A variety of miniature toy cars.

A wall and a ruler.

What To Do:

Predict what will happen to each car upon colliding and explain why.

1. Apply a gentle force on one car as you push it into a wall from a 2-3 yard/meter distance. Measure the movement after the car collides. Repeat with a greater force.
2. Work in pairs. Apply a gentle force and push the cars at the same time so that they collide. Measure the movement after each car collides. Repeat with a greater force.

Record and report your findings.

Background Information

Colliding Objects Lab

Newton's Third Law states that for every action, there is a reaction. This lab helps students to understand what happens when two objects collide. An extension to this lab would be to design or discuss solutions to address the impact from the motion of two colliding objects (as per NGSS) Ask students what engineers have done to help make collisions in cars less dangerous. (*airbags, bumpers, alerts on newer models.*)