## Content Outline for Teaching (continued)

C. **Law of conservation of momentum**—the total momentum of objects that collide with each other does not change.

1. There are many ways collisions can occur.
   a. In one type, objects stick together and move still stuck together, although possibly at different speeds.
   b. In another type, two objects bounce off each other when they collide, and may transfer momentum from one to the other.
2. In both cases, the total momentum of the objects that collide is the same before and after the collision.

**DISCUSSION QUESTION:**

How is momentum calculated? *Momentum equals mass times velocity.*