

Egg Toss [Activity]

This is an outdoor activity that works well as an in-class competition between lab groups. Combined with the chance to make a bit of a mess – this activity is generally a student favorite!

Answers to Summing Up Questions

1. Many groups can make it to 10 yards or meters. Some to 20; few to 30.
2. Allowing the egg to continue moving while catching it; this extends the stopping time.
3.
 - a. The mass is the same either way.
 - b. The change in velocity is the same either way.
 - c. The change in momentum is the same either way.
 - d. The stopping time is greater for the gradual-stop catch.
 - e. The stopping force is greater in the sudden-stop catch.
4. Airbags extend the stopping time for a person moving forward in the car during a collision. It therefore reduced the stopping force compared to what it would be if they were to hit the steering wheel or dashboard.
5. Elastic cords used in bungee-jumping, nearly any kind of “shock-absorption” padding, crumple zones designed into automobile frames, bending one’s knees upon landing from a jump.