Name:

Date:

Period:

Prediction – answer the question, keeping in mind impulse and momentum, what are some techniques you think will be helpful in NOT breaking the egg?:

*I predict…*

Data:

*My partner and I were able to successfully throw the egg \_\_\_\_\_\_ feet without it breaking.*

*The winning team successfully threw the egg \_\_\_\_\_\_\_ feet without it breaking.*

Conclusions – Answer in complete sentences:

1. What techniques were used when making a successful catch?
2. What do these techniques have to do with stopping force and time of impact?
3. Compare a sudden stop with a slow/gradual stop:
   1. In which case was the mass of the egg greater; or was it the same?
   2. In which case was the change in velocity of the egg greater; or was it the same?
   3. In which case was the change in the momentum of the egg greater; or was it the same?
   4. In which case was the stopping time greater; or was it the same?
   5. In which case was the stopping force greater; or was it the same?

4. How do your observations explain the purpose of airbags in cars? (Do not use words like “cushion” or “absorb.” Instead use words like “stopping time,” “stopping force,” or “change in momentum.”