**Phet Collision Lab Pg. 2**

**Goals:**

Build vocabulary to explain positive and negative momentum

Be able to explain how momentum is conserved in an isolated system

**After Lab questions**

1. When one ball is moving and the other is stationary in the “Before” what happens to the momentum of each “After”? (Who gains, who looses?) (Describe in two complete sentences below.)
2. Why are some of the momentum numbers positive and then after the collision negative?
3. Look at a row of data where the sphere were the same mass, but the velocities were different. Describe the velocities of each sphere before and after the collision. (Use your table to tell real numbers) Can you infer a relationship between them?
4. Look at a row of data where the sphere were different masses but the same magnitude of the velocities. Describe the momentums both before and after the collision. (Use your table to tell real numbers) Can you infer a relationship between them?
5. When you are done collecting data, change the elasticity arrow on the upper right hand corner. What happens when you change it to an inelastic collision?
6. Go to the “Advanced” blue tab. What is different about it? Play with the sim and see what you can find out. List items below
7. Create your own definition below of “elastic” and “inelastic” below based on you experiences.
8. Create a scenario in the first tab where both spheres are moving before the collision, and then after the collision they stop. Describe in detail what needs to take place.
9. What does it take to have “0” momentum?