Momentum

- **** REVIEW ****
  - **Velocity … [v =   ]**

  - **Acceleration … [a =   ]**

  - **Distance … [d =   ]**

- **Momentum**

  - **Momentum is where *INERTIA* meets *MOTION***
  - **Momentum = mass x velocity   [P =   ]**

- **Impulse**

  - **Impulse = force x time interval**
  - **Examples: baseball bat, golf club, ping pong racquet, gun, crash, hit**

- **Impulse *CHANGES* Momentum**

  - **As force changes velocity, impulse changes momentum.**

- **Conservation of Momentum … $P_{before} = P_{after}$**

- **Collisions**

  - **Simple Collisions: one on one, few on few in a straight line**
  - **Complex Collisions: more on more, angles (vectors)**
  - **Elastic vs. Inelastic**
    - **elastic = bounces … action reaction causes more force delivered**
    - **inelastic allows less reaction and feels less force**
    - **[ball bouncing off vs. sticking]**