

Chapter 3 Safety Learning Objectives

Objectives: By the end of this chapter, students should be able to:

1. State and apply Newton's First Law of Motion in problem solving situations.
2. State and apply Newton's Second Law of Motion in problem solving situations.
3. State and apply Newton's Third Law of Motion in problem solving situations.
4. State the equation for work: $W = Fd$ able to solve for any of the three variables given the other two.
5. State the Work – KE relationship, $W = \Delta KE$, and be able apply to problem solving situations.
6. Given the equation for linear momentum: $p = mv$ able to solve for any of the three variables given the other two.
7. State the Law of Conservation of Linear Momentum ($p_i = p_f$) and use in collisions or explosions.
8. State the difference between elastic and inelastic collisions.
9. State that the change in momentum of an object is due to the impulse applied to it.
10. Give the impulse equation: $F\Delta t = \Delta mv$, be able to solve for any of the four variables given the other three.