

# PHYSICS CONTENT FACTS

The following is a list of facts related to the course of Physics. A deep foundation of factual knowledge is important; however, students need to understand facts and ideas in the context of the conceptual framework. This list is not intended to provide a comprehensive review for State and National Assessments. Its purpose is to provide a highlight of the factual material covered in Physics. This list is not all inclusive, be sure to check Nevada State Standards and your district syllabi.

## FLUIDS

- Pressure is the magnitude of the force on a surface per unit area  $P = \frac{F}{A}$
- Pressure within a fluid increases with depth  $P = \rho gh$
- Pascal's Principle states that pressure applied to a fluid in a closed container is transmitted equally to every point of the fluid and to the walls of the container  $P = \frac{F_1}{A_1} = \frac{F_2}{A_2}$
- Archimedes' Principle states that any object completely or partially submerged in a fluid experiences an upward buoyant force equal to the magnitude of the weight of the fluid displaced by the object  
 $F_b = F_g(\text{displaced fluid}) = m_f g$  or  $F_{net} = (\rho_f V_f - \rho_o V_o) g$
- Bernoulli's Principle states that the pressure within a fluid decreases as the fluid's velocity increases

