

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.

MAGNETISM

- The direction of a magnetic field is defined by the direction a compass needle points
- Magnetic fields point from the north to the south outside the magnet and south to north inside the magnet
- Magnetic flux is measured in webers
- Left hands are for negative charges and right hands are for positive charges
- The first hand rule deals with the B-field around a current bearing wire, the third hand rule looks at the force on charges moving in a B-field, and the second hand rule is redundant
- Solenoids are stronger with more current or more wire turns or adding a soft iron core
- A wire moving through a magnetic field induces an electric current through the wire

$$emf = -N \frac{\Delta[AB(\cos \theta)]}{\Delta t}$$

- A charged particle moving through a magnetic field experiences a deflecting force

$$F_{magnetic} = qVB$$

