Unit 4 Magnetism Vocabulary and Formulas

Chapter 36
Key Terms
**Electromagnet** (36.5) – A current carrying wire with many loops
**Magnetic Domain** (36.4) – A cluster of aligned atoms in a magnet
**Magnetic Field** (36.2) – The area around a magnet in which a magnetic force is exerted
**Magnetic Pole** (36.1) – The region on a magnet that produces magnetic forces

Chapter 37
Key Terms
**Electromagnetic Induction** – The phenomenon of inducing voltage by changing the magnetic field around a conductor
**Faraday’s Law** – The induced voltage in a coil is proportional to the number of loops and the rate at which the magnetic field changes within those loops.
**Generator** – A device that uses a current carrying wire and a magnet to convert mechanical energy to electrical energy (essentially the opposite of a motor)
**Transformer** – A device that uses two coils (a primary and secondary) and a magnet to increase and decrease the voltage through the process of electromagnetic induction.

Formulas

\[ F = BIL \]

\[ F = qvB \]