

Magnetism: Objectives and Vocabulary

By referring to the various handouts, notes, lab activities and homework covered during this unit, then at the end of this unit of study, each student should be able to:

1. Explain what a magnetic field is and describe where it is strongest and weakest on a typical bar magnet.
2. Explain what a domain is, and how they are different between non-magnetized forms of Iron, Cobalt, and Nickel versus the same substances after they become magnetized.
3. Give an explanation of what a natural magnet is as well as its common name and mineral name.
4. Know the Law of Magnets and the other law it is similar to.
5. Explain what a permanent magnet is and typical ways to make one.
6. Know what a temporary magnet is, what it is usually called. Also know the basic construction of one, how it works, the factors that affect its strength, and the advantages it has compared to a permanent magnet.
7. Explain why compasses/magnets point north, and what this tells you about the true polarity of the Earth's north magnetic pole. Also know the origin of the magnetic compass.
8. Explain the construction and operation of a typical electric meter.
9. Know the uses for three typical meters, the galvanometer, ammeter, and voltmeter, and how they are connected in a circuit.
10. Explain the electric motor effect, and the generator effect.
11. Know the basic relationship between magnetism and electricity.
12. Explain the basic construction and operation of a simple electric motor.
13. Know the purpose of the electric transformer, its basic design, operation, and types. Also know where transformers are used in home and school.

Vocabulary:

Magnet	Permanent magnet	Ammeter	Slip rings
Magnetic field	Temporary magnet	Galvanometer	Electric transformer
Magnetic pole	Electromagnet	Electric motor and effect	Input and output voltages
Magnetized	Core	St. Louis Motor	Step up transformer
Non-magnetized	Magnetic compass	Coil	Step down transformer
Law of Magnets	Magnetic North pole	Brushes	Adaptor
Natural magnet	Electric meter	Commutator	
Magnetite	Voltmeter	Electric generator and effect	