Chapter 36 & 37: **Magnetism**

Text:

Chapter 36	*Chapter 37*
Think and Explain: 1, 2, 4, 5	Think and Explain: ---
Think and Solve: ---	Think and Solve: ---

Vocabulary:
magnetic pole, magnetic field, magnetic field lines, magnetic domains, electromagnet, right hand rule for magnetic field direction, right hand rule for direction of force on a current carrying wire, motor, electromagnetic induction, Faraday's law, generator, direct current, alternating current, transformer

Equations:
$F_{\max} = ILB$

Key Objectives:
Concepts
- ❑ Like poles repel and unlike poles attract
- ❑ Magnetic poles cannot be isolated
- ❑ Understand what makes magnetic substances magnetic and the role of electrons in creating magnetic fields.
- ❑ State the type(s) of fields the surround a moving charge.
- ❑ Understand the shape and direction of the magnetic field around a current carrying wire.
- ❑ What quantities affect the strength of an electromagnet?
- ❑ Find the direction of force on a current carrying wire placed in a magnetic field.
- ❑ Recognize when the current carrying wire experiences a maximum force or no force.
- ❑ Understand how a motor works to convert electrical energy to mechanical energy.
- ❑ Earth's magnetic poles
- ❑ Be able to relate Faraday's law to the amount of induced current in a wire.
- ❑ Compare motors and generators
- ❑ Understand how a transformer works and how it makes use of electromagnetic induction.
- ❑ E-M waves??

Problem Solving
- ❑ Calculate the maximum force on a current carrying wire in a magnet field.
- ❑ Recognize when the force on a current carrying wire is zero.