

# Automotive Electricity and Electronics

## Chapter 14 – Magnetism and Electromagnetism

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Capacitance, Capacitor Construction and Operation, and Factors of Capacitance
  2. Uses for Capacitors and Capacitors in Circuits
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#### **OBJECTIVES:**

1. Define magnetism and explain the concepts of magnetic induction, permeability, and reluctance.
  2. Explain how an electromagnet works.
  3. Explain how electromagnetism is used in relays and solenoids.
  4. Explain how magnetism and voltage are related.
  5. Describe how an ignition coil works.
  6. Describe ways to reduce electromagnetic interference.
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#### **RESOURCES:** ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Inspect and Test the Relays
  2. Chapter PowerPoint
  3. [Crossword and Word Search Puzzles \(A6\)](#)
  4. [Videos: \(A6\) Electrical/Electronic Systems](#)
  5. [Animations: \(A6\) Electrical/Electronic Systems](#)
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#### **ACTIVITIES:**

1. Task Sheet: Inspect and Test the Relays
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#### **ASSIGNMENTS:**

1. Chapter crossword and word search puzzles from the website.
  2. Complete end of chapter quiz from the textbook.
  3. Complete multiple choice and short answer quizzes downloaded from the website.
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#### **CLASS DISCUSSION:**

1. Review and group discussion chapter [Frequently Asked Questions](#) and [Tech Tips](#) sections.
  2. Review and group discussion of the five (5) chapter [Review Questions](#).
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#### **NOTES AND EVALUATION:**

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