

# Automotive Electrical and Engine Performance - 9th edition

## Ch9: Magnetism and Electromagnetism

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Fundamentals of Magnetism, Electromagnetism, and Uses of Electromagnetism
  2. Electromagnetic Induction, Ignition Coils, and Electromagnetic Interference
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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. Discuss electromagnetic induction.
  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)

1. Crossword Puzzle and Word Search
  2. Videos: (A6) Electrical/Electronic Systems Videos
  3. Animations: (A6) Electrical/Electronic Systems Animations
  4. Animations: (A8) Engine Performance
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#### **ACTIVITIES:**

1. Chapter PowerPoint
  2. Crossword Puzzle and Word Search
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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. Ten (10) question end of [Chapter Quiz](#).
  3. Five (5) end of chapter [Review Question](#) for class discussion.
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#### **NOTES AND EVALUATION:**

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