

# Chapter 5 Lesson Plan

## Information Technology

Chapter Resources		
Textbook Activity	Teacher CD	Online Learning Center
<b>Build a Web Site About Engineering and Design</b> Design and build a multi-page Web site focused on a topic involving engineering and design.	Lesson Plan Flash® Presentation ExamView® Chapter Test	Chapter Activities Chapter Quizzes

### FOCUS

This chapter explains the function of various parts of a computer system as well as use of the binary system in electronics. Also reviewed is the use of computers to manage information and access the Internet.

### Objectives

- Describe the basic parts of a computer system and explain how computers work.
- Explain how binary code works.
- Identify and describe ways in which computers use and manage information.
- Discuss the role of the Internet in accessing information.

### Tying to Previous Knowledge

Ask students how they most often use a computer. Ask them to explain how the computer was managing information in the examples cited.

Demonstrate how the binary system is similar but different to the system of base ten that we typically use.

### TEACH

1. **Disassembly.** Obtain a couple of obsolete and/or broken computers. One can be taken apart and used to point out various components, especially the main processor chip. Another can be used for discussions about obsolescence in computer technology.
2. **Visual aids.** Obtain a handful of obsolete or damaged IC chips. (Check local electronic repair shops or computer stores.) The chips can be passed around for students to hold and examine closely during discussions.
3. **Demonstration.** If your classroom or school has a computer lab (or other setting) with Internet access, arrange to take your students into it for several class periods. Arrange to use the Internet at least once.
4. **Binary code.** Create a simple binary math lesson, showing how to write numbers in binary code.

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## Information Technology (continued)

### ASSESS

Have students complete Chapter Test 5. Chapter tests are found in the *ExamView*® Assessment Suite on this Teacher Resource CD-ROM.

### Reteach

1. Show examples or pictures of a vinyl record and a hard drive or similar device. Ask students to compare and contrast the two.
2. Ask each student to write the year of his or her birth using the binary system.

### Enrich

1. Many of your students have grown up taking computers for granted. Some will have used a computer since they were small children. Help students understand the extremely rapid development that computer technology has experienced and that, historically speaking, personal computers are a very recent invention. If available, use a computer that is ten or more years old as an example of how quickly computers become obsolete.
2. If a computer with Internet access is available, demonstrate a browser program and various search engines for your students. Note the advanced (Boolean) search methods that are available.

### REFLECT

Have the students suggest ways in which computers affected their lives on the current day. Note that many devices utilize microprocessors (a kind of mini-computer), from alarm clock radios to personal music players.