Chapter 1

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.**	input	**a.**	program that tells the computer what to do
_____ **2.**	bit	**b.**	group of 8 bits
_____ **3.**	byte	**c.**	area where data and instructions are stored while the computer is working
_____ **4.**	output	**d.**	physical parts of a computer
_____ **5.**	hardware	**e.**	raw data entered into a computer
_____ **6.**	central processing unit	**f.**	program that does maintenance or repair tasks
_____ **7.**	random access memory	**g.**	part of a computer that processes data
_____ **8.**	peripheral	**h.**	basic unit of data a digital computer can understand
_____ **9.**	software	**i.**	hardware separate but connected to the computer
_____ **10.**	utility software	**j.**	the results of the computer's processing

Check Your Comprehension

Directions: *Complete each sentence with information from the chapter.*

1. A(n) _____ is a machine that changes information from one form into another.
2. _____ is a basic operation of computers.
3. Data and instructions in computers are coded with a(n) _____ because computers only understand two values.
4. The CPU uses _____ to hold data it is working on.
5. Data in RAM is _____ when the computer is turned off.
6. A(n) _____ is an example of a connector that works with only one kind of peripheral.
7. SCSI and USB connectors connect _____ peripherals at the same time.
8. Some organizations need _____ software programs to do very specific jobs.
9. _____ software is used to connect to the Internet and send e-mail.
10. Off-the-shelf software is _____ expensive than custom software because publishers sell more units.

Think Critically

Directions: *Answer the following questions.*

1. How do analog and digital computers differ?

2. What is the RGB hexadecimal value for a pure intense green? Explain your answer.

3. What are the differences between primary and secondary storage?

4. What is the difference between system software and application software? Give at least one example of each.

5. What type of application software do you use most? Explain.

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Look at a computer. Create a five-column chart. In the first column, list all the hardware that you can identify. In the remaining columns, state whether each item is used for inputting, processing, outputting, or storage. Examine how the different pieces are connected to the computer. What other hardware do you think the computer has that you cannot see? With your teacher's permission, unplug and replug all of the computer components, including external drives, a printer, mouse, keyboard, monitor, projector, and the power supply. Start the system. Record your observations. Discuss your findings with the class.

B. Using the Internet or library resources, research at least three types of processing devices used in laptop computers. Keep track of your sources. Create a chart that compares and contrasts the price, top speed, and number of operations per second each one can perform. Determine which device would be most appropriate for working with text, graphics, and math. Write a brief summary explaining your findings, including a list of sources or bibliography. Read your summary out loud to a partner and listen as your partner reads his or hers out loud to you.

Chapter 2

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.** command	**a.** a sequence of instructions
_____ **2.** motherboard	**b.** instruction for the computer to do something
_____ **3.** read-only memory	**c.** a network of connected electronic components
_____ **4.** programmer	**d.** where the CPU is located
_____ **5.** compiler	**e.** high-speed computer for complex work
_____ **6.** supercomputer	**f.** another name for personal computer
_____ **7.** algorithm	**g.** set of chips that starts the computer when it is turned on
_____ **8.** server	**h.** language that translates source code into binary form
_____ **9.** desktop computer	**i.** writes instructions for a computer to follow
____ **10.** circuit	**j.** computer accessed by users on a network

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. What would you most likely use a microphone to input?
- **a.** commands
- **b.** images
- **c.** sound
- **d.** text

2. Data from which part of a computer is lost when it is turned off?
- **a.** the CD-ROM
- **b.** the hard drive
- **c.** RAM
- **d.** ROM

3. Which is NOT a component in programs?
- **a.** loop
- **b.** choice
- **c.** sequence
- **d.** decision

4. Which is an example of a binary number?
- **a.** 10011001
- **b.** –342
- **c.** 67439622
- **d.** .0000002

5. Which of the following is NOT a task performed by operating systems?
- **a.** controlling a printer
- **b.** managing memory
- **c.** coordinating how programs run
- **d.** compiling a program

6. What kind of machine is more powerful than a server?
- **a.** desktop computer
- **b.** portable computer
- **c.** mainframe
- **d.** handheld computer

Think Critically

Directions: *Answer the following questions.*

1. What are the functions of compilers and interpreters?
2. Explain the difference between the operation of compilers and interpreters.
3. Identify and explain the concept of an algorithm.
4. Explain how the following data types are used to represent variable data in software development: string, numeric, character, integer, and date.
5. List at least three object-oriented programming languages and three procedural programming languages. Explain how they are used in software development.

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Make a flowchart for a sequence of actions you do every day, such as getting ready for school or packing your lunch. Does your flowchart contain the main components of programs: sequence, decision, and loop? Create an IF-statement for one step of your flowchart.

B. Collect three advertisements for home computer systems. List the components that are offered in each ad. Compare the three systems for their appropriateness for inputting and outputting text, images, and sounds. Compare their capacity to store data. Based on the features, write a brief explanation of which machine you think is best and why. Read your explanation out loud to a partner and listen as your partner reads his or hers out loud to you.

C. Work with a partner to practice using a digital multimeter (DIMM). Being sure to follow all safety protocols, use the DIMM to measure AC and DC voltages. Then, measure AC and DC current. Finally, measure the resistance of a circuit consisting of resistors. If possible, construct simple circuits on a breadboard or with a soldering iron.

Chapter 3

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ 1.	command	a. produces images by sending electrical signals to crystals
_____ 2.	pointer	b. any piece of hardware that displays or plays back the result of computer processing
_____ 3.	output device	c. device with hammers or pins that strike a ribbon to leave ink on paper
_____ 4.	digital camera	d. lets you input printed images into a computer
_____ 5.	scanner	e. a printer that contains fax, copier, and scanner capabilities
_____ 6.	repetitive strain injury	f. follows a mouse's movements
_____ 7.	All-in-One printer	g. device such as an inkjet or laser printer
_____ 8.	liquid crystal display	h. takes photographs that a computer can read
_____ 9.	impact printer	i. condition caused by making the same movements again and again
_____ 10.	nonimpact printer	j. instruction to a software program to take an action

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. Which type of input provides answers to questions issued by programs?
   a. commands
   b. data
   c. responses
   d. software
2. Which device can be used to connect a computer to the Internet?
   a. keyboard
   b. modem
   c. pointing device
   d. scanner
3. Which of the following devices can be designed to reduce the problem of RSIs?
   a. scanner
   b. digital camera
   c. monitor
   d. keyboard
4. What do output devices provide?
   a. data to be processed
   b. software code
   c. text and images only
   d. results of processing
5. Which of the following is NOT descriptive of a CRT?
   a. heavy
   b. uses little power
   c. heats up easily
   d. affordable
6. What kind of output device would NOT be used to output images?
   a. CRT
   b. LCD
   c. printer
   d. speaker

Think Critically

Directions: *Answer the following questions.*

1. Why are microphones or digital cameras unlikely to cause the damage that is found in repetitive strain injury?

2. Identify the type and purpose of at least three specialized input devices.

3. What type(s) of monitor(s) do you use at school? What are the advantages and disadvantages of the different types of monitors?

4. How is video similar to ordinary graphics? How is it different?

5. Why have nonimpact printers all but replaced impact printers?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Open a word-processing program. Use the keyboard to input the definition of the word "Text" on page 33. Input the paragraph a total of five times. Each time you do so, time yourself. Print the five paragraphs. Compare the five times. Determine whether you were able to type faster and more accurately with practice.

B. With your teacher's permission, practice disconnecting and connecting your computer system's input and output devices. For example, disconnect and connect the mouse, keyboard, and printer. Then, verify that the devices are working correctly by opening a word-processing document and typing a paragraph about the different input and output devices you are working with. Move around in the document using the keyboard and the mouse, and edit the paragraph to include an explanation of which device you think is easier to work with and why. With your teacher's permission, print the document. Read your paragraph to a partner or to the class and answer any questions.

Chapter 4

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.**	compress	**a.**	turns text into audio
_____ **2.**	fax machine	**b.**	prints high-quality output suitable for photos
_____ **3.**	optical character recognition	**c.**	software that lets the computer play like an electronic instrument
_____ **4.**	digital video camera	**d.**	software that scans text and turns it into a digital file
_____ **5.**	video capture card	**e.**	memory on a video adapter
_____ **6.**	video adapter	**f.**	to make files smaller
_____ **7.**	VRAM	**g.**	captures still images, which are then shown rapidly
_____ **8.**	thermal transfer printer	**h.**	controls video output to the monitor
_____ **9.**	speech synthesis software	**i.**	converts analog video into digital
_____ **10.**	MIDI	**j.**	scans documents and sends them over phone lines

Check Your Comprehension

Directions: *Complete each sentence with information from the chapter.*

1. To play sound that has been stored in a computer, it must be converted to _____ format.
2. Digital photos can be input from a camera by transporting them on a disk or sending them to the computer using a(n) _____.
3. _____ software allows people to scan text instead of rekeying it.
4. Photos that haven't been taken with a digital camera can still be input into a computer using either a fax machine or a(n) _____.
5. The amount of current that a video adapter sends to the monitor determines the _____ display on the monitor.
6. Three-dimensional graphics include height, width, and _____.
7. DLP projectors are better than LCD projectors for giving a presentation to many people because the _____ appear sharper.
8. Standard printers create output by printing tiny _____ on paper.
9. Headsets and the room-sized _____ create virtual three-dimensional environments.
10. Audio can be output to headphones or _____.

Think Critically

Directions: *Answer the following questions.*

1. What is one advantage of having memory on a video card dedicated to displaying graphics?

2. Why are sound and graphics files compressed?

3. Suppose someone had to scan ten images. Which kind of scanner would require him or her to stay closer to the machine as it is working, a sheetfed or flatbed? Why?

4. Would a 3-D graphics adapter be needed on a machine used mostly for word processing and spreadsheets? Why or why not?

5. Which kind of printer would be better for printing a report for school that included two or three photographs, an inkjet or a thermal transfer printer? Why?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Divide a sheet of paper into two columns, creating a T-chart. Write the heading *Standard System* over the left column. Write the heading *Graphics System* over the right column. In each column, list the input and output components you would include if you were setting up these two computer systems. Include the types of output cards you would want. Assume that the standard system will be used for word processing and spreadsheet work. Assume that the graphics system will be used for high-quality photographs.

B. Find out what kind of sound your computer can output. If possible, output audio and then determine what kinds of software your computer used to output the sound. With a partner or as a class, discuss for whom audio output is an advantage and when this feature is a necessity.

Chapter 5

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.** storage device	**a.** temporary workspace on a computer
_____ **2.** memory	**b.** sometimes used when referring to a computer's RAM
_____ **3.** primary storage	**c.** uses laser to read information
_____ **4.** secondary storage	**d.** users access from and save information to this type of device
_____ **5.** read/write device	**e.** common secondary storage device
_____ **6.** random-access storage device	**f.** computer component that retains data even after power is shut off
_____ **7.** optical storage device	**g.** storage device that lets computer go directly to the needed information
_____ **8.** hard drive	**h.** read-only optical device
_____ **9.** read-only device	**i.** can only read data from the storage medium
_____ **10.** CD-ROM drive	**j.** any type of storage device that holds data permanently; not RAM

Check Your Comprehension

Directions: *Complete each sentence with information from the chapter.*

1. Storage devices _____ information even when a computer is turned off.
2. Information saved as a(n) _____ is identified by a unique name.
3. The _____ is a set of programs that directs a computer to start up.
4. RAM stores its contents _____ and is cleared when the computer is shut down.
5. A computer's BIOS is usually stored in a special memory chip, called _____.
6. Apple's iPod is an example of _____ that stores data in the popular _____ format.
7. The most common secondary storage device is a(n) _____.
8. _____ storage allows users to access rarely used computer files.
9. A magnetic tape is an example of a(n) _____ storage device.
10. _____ lets you store data on a remote computer.

Think Critically

Directions: *Answer the following questions.*

1. Which type of secondary storage device do you use most at school? Do you think this will change in the near future? If so, why?

2. What can you do with a CD-RW that you cannot do with a CD-R?

3. Why do you think computer hard drives locate information directly, rather than sequentially?

4. What are the ways in which computer users would use a CD-ROM drive at home? At work? At school?

5. Where do you think users of computer games sold on CDs and DVDs store their information? Why?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Look at your computer at school and find out how much memory it currently has. Next, use online documentation or other resources, such as the manufacturer's Web site, to compare your computer memory to the maximum amount of memory your computer can hold. Identify advantages to having more random access memory and compare this to the cost. As a class, conclude whether or not your school computers have sufficient memory to meet students' needs.

B. Go online and do research on storage service providers. Take notes and keep track of your sources as you work. Be sure to evaluate the information and only use it if it is accurate, relevant, and valid. What services and features do they offer? How do they protect the data they store? How easy is it for customers to access their data once they have given it to the service? Can customers share the stored data with other people? What fees do these services charge? Do you think such services can be useful to individuals as well as to companies? Discuss your findings with a partner, or as a class.

Chapter 6

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.** storage media
_____ **2.** platter
_____ **3.** write
_____ **4.** read/write head
_____ **5.** access time
_____ **6.** USB flash drive
_____ **7.** SSD
_____ **8.** data transfer rate
_____ **9.** laser sensor
____ **10.** pit

a. amount of time it takes storage device to begin reading data
b. one of the disks in a hard drive
c. removable, portable storage device inserted into a USB slot
d. save information on a storage medium
e. indentation on optical disc that does not reflect light
f. a mass storage device, similar to a hard disk drive that uses flash memory
g. needle-like device that retrieves and stores data on a magnetic disk
h. tool in optical drive that reads information
i. number of bits per second at which data is moved from a storage device to RAM
j. material that retains stored information saved by a computer storage device

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. What type of media are used in a computer hard drive?
- **a.** magnetic
- **b.** optical
- **c.** solid state
- **d.** photo

2. What does the performance of a hard drive affect?
- **a.** if a read/write head can store data
- **b.** where a read/write head stores data
- **c.** how fast a computer reads and writes data
- **d.** the computer's memory

3. Which medium stores the least amount of information?
- **a.** DVD
- **b.** CD
- **c.** hard drive
- **d.** USB flash drive

4. Optical drives read information by using a _____.
- **a.** memory chip
- **b.** magnetic sensor
- **c.** laser sensor
- **d.** binary code

5. How many layers of material make up an optical disc?
- **a.** one
- **b.** two
- **c.** three
- **d.** four

6. Which of the following storage devices allow you to write data to a medium multiple times?
- **a.** CD-Rs
- **b.** read/write storage devices
- **c.** DVD-ROMs
- **d.** laserdiscs

Think Critically

Directions: *Answer the following questions.*

1. Why are disks (and discs) considered secondary—and not primary—storage devices?

2. Why is it important to be sure data is protected and secure? Give an example of how you can keep your data safe.

3. What can happen if a read/write head is disturbed?

4. How are magnetic storage devices organized?

5. If USB flash drives and CD-Rs cost about the same per megabyte of storage, which do you think is more advantageous? Why?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Find out the age and the storage capacity of the hard drive on the computer you use at school. By using computer ads or visiting a local retailer, find out what improvements have been made to hard drives currently on sale. What conclusions can you draw about today's computers?

B. Research evolving and emerging storage technologies. Take notes and keep track of your sources. What kinds of storage devices do you think computers will have in five to ten years? What trends, if any, do you predict? Present an oral report on the topic to your class.

Chapter 7

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.** interface
_____ **2.** crash
_____ **3.** graphical user interface
_____ **4.** desktop
_____ **5.** icon
_____ **6.** driver utility
_____ **7.** Plug and Play
_____ **8.** backup utility
_____ **9.** file compression utility

a. area on a computer screen where you perform work
b. to stop working
c. program that controls input/output devices
d. picture that represents something on a computer
e. on-screen tools that let you use the computer
f. program that copies a file onto another medium
g. lets you use a mouse to work with the computer
h. capable of detecting compatible devices
i. reduces file size without harming data

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. Which of the following is NOT usually handled by the operating system?
- **a.** managing programs
- **b.** dealing with input/output devices
- **c.** publishing Web pages
- **d.** interacting with the user

2. Which kind of computer operating system usually requires the least amount of user interaction?
- **a.** real-time systems
- **b.** single-user/single-task systems
- **c.** single-user/multitask systems
- **d.** multi-user systems

3. Which of the following is a key part of a graphical user interface?
- **a.** command words
- **b.** cursors
- **c.** memory
- **d.** icons

4. Which operating system is found most often on large business and scientific computers?
- **a.** Microsoft Windows
- **b.** Mac OS
- **c.** UNIX
- **d.** Linux

5. Which of the following do operating systems, application programs, and user data have in common?
- **a.** They are all system utilities.
- **b.** They are all Windows-based.
- **c.** They are all created by the user.
- **d.** They are all stored in files.

6. What kind of utility is used to reduce the size of a file?
- **a.** driver utility
- **b.** program utility
- **c.** backup utility
- **d.** file compression utility

Think Critically

Directions: *Answer the following questions.*

1. What are the major functions of an operating system?

2. What effect do you think the development of graphical user interfaces had on the number of people using computers? Why?

3. Pick one operating system component such as disk operations, GUI, or hardware drivers and explain its purpose.

4. Why might you install an operating system update?

5. Why is it a good idea to back up your important files?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Go to Help in a Microsoft Windows operating system. Find out how it is organized, but make no changes to the system settings. Follow the same process on a Macintosh computer. Which Help section was easier to use? Provide reasons for your preference. Discuss your conclusions as a class.

B. Find ads in computer magazines or on the Web that are sponsored by companies that sell backup and file compression utilities. Make a chart to summarize the features of three products in each category. Note which operating system each product works with and its price. Create a word-processing document in which you summarize your findings. Name and save the document using proper file management techniques. With your teacher's permission, print the document. Read it out loud with a partner or to the class.

C. With your teacher's permission, use the Internet to research two or three operating systems for mobile devices. As you work, take notes and keep track of your sources. Evaluate the information you find and only use it if it is accurate, relevant, and valid. Create a column chart comparing and contrasting the operating systems. Share the chart with a partner or with the class.

Chapter 8

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.**	boot	**a.**	to start the computer and load the operating system
_____ **2.**	POST	**b.**	option that appears when an item is selected from the menu bar
_____ **3.**	window	**c.**	utility that looks for errors in magnetic media
_____ **4.**	pull-down menu	**d.**	changes the display on the desktop
_____ **5.**	pop-up menu	**e.**	two to four letters that identify a file's format
_____ **6.**	screen saver	**f.**	series of tests run during the boot process
_____ **7.**	file extension	**g.**	ability to share files across operating systems
_____ **8.**	cross-platform compatibility	**h.**	shortcut command that appears anywhere in a window
_____ **9.**	disk scanner	**i.**	frame that displays a document or file
_____ **10.**	file fragmentation	**j.**	having parts of files stored on different areas of a disk or hard drive

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. Which of the following indicates that the computer can accept input from the keyboard and display information on the monitor?
- **a.** POST
- **b.** BIOS screen
- **c.** GUI
- **d.** cross-platform application

2. At what point in the boot process can users be asked their username and password?
- **a.** at the control panel
- **b.** in a screen saver
- **c.** in a file manager
- **d.** at login

3. If a pop-up menu is context-sensitive, what is it related to?
- **a.** file format
- **b.** printer settings
- **c.** what you are doing
- **d.** operating system

4. Which of the following is NOT a system change most users should attempt?
- **a.** moving the operating system
- **b.** adding a scanner
- **c.** changing mouse settings
- **d.** removing a program

5. Along with the data itself, which of the following is saved with a file?
- **a.** login procedure
- **b.** code for the application that created it
- **c.** icon that describes it
- **d.** maintenance utility

6. Which of the following is one way that a file can be corrupted?
- **a.** by deleting it
- **b.** by appearing on the desktop
- **c.** by moving it to a new folder
- **d.** by storing it on a damaged disk

Think Critically

Directions: *Answer the following questions.*

1. List at least one program that you run on a personal computer but wouldn't run on a mobile device?

2. What is a file type and why is it important? Give at least three examples of file types, including the associated file extension and program.

3. Why do most operating systems let users make system changes?

4. Suppose some of the reporters and photographers for your local newspaper work from home and are networked. What is an example of one application that would allow them to work without concern for the operating system they use?

5. What are system management tools and how are they used? Give an example.

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. With a partner, interview three adult computer users: one who uses Microsoft Windows, one who uses a Macintosh, and one who has experience with both operating systems. Prepare written questions related to ease of learning the operating system, ease of use, availability of programs, and overall satisfaction with the operating system, and take notes to record the answers. Add your findings to your own experiences and write a conclusion about the user preferences of the two major operating systems. Share your conclusion with a partner or with your class.

B. Explore the desktop on your computer. Identify the icons on the desktop and explain what each launches. Use the taskbar to identify files or programs that are open and the file formats they are in. How does the desktop help you manage your work on the computer? Using a text editor, word-processing application, or on paper, write a paragraph explaining the concept of a computer desktop. Then, write step-by-step instructions that someone could use to arrange items on the desktop. With your teacher's permission, print or publish the document and exchange it with a classmate. Read your classmate's work. As a class, discuss why step-by-step instructions are useful.

Chapter 9

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.**	personal information manager	**a.**	software that you can try before purchasing
_____ **2.**	integrated software	**b.**	uncopyrighted software that is given away without cost
_____ **3.**	productivity suite	**c.**	software that stores phone numbers and creates schedules
_____ **4.**	shareware	**d.**	combines several full-featured programs in one package
_____ **5.**	freeware	**e.**	third-party software programs developed specifically for certain smart phones
_____ **6.**	public domain software	**f.**	to delete a program from the computer
_____ **7.**	uninstall	**g.**	combines basic features of several applications into one package
_____ **8.**	maximize	**h.**	move from one place in a window to another
_____ **9.**	apps	**i.**	to make a window as large as possible
_____ **10.**	scroll	**j.**	copyrighted software that is given away without cost

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. Which of the following items is NOT an example of application software?
- **a.** spreadsheet
- **b.** database
- **c.** operating system
- **d.** word processor

2. Which of the following types of application software combines the basic features of several applications?
- **a.** stand-alone program
- **b.** integrated software
- **c.** productivity suite
- **d.** personal information manager (PIM) program

3. Which of the following types of software must be purchased in advance?
- **a.** commercial software
- **b.** shareware
- **c.** freeware
- **d.** public domain software

4. Which of the following types of software is available on a try-before-you-buy basis?
- **a.** commercial software
- **b.** shareware
- **c.** freeware
- **d.** public domain software

5. Which of the following features allows the user to launch an application?
- **a.** Help menu
- **b.** menu bar
- **c.** title bar
- **d.** desktop icon

6. Which of the following tools allows the user to move from one part of a window to another?
- **a.** scroll arrows
- **b.** scroll icons
- **c.** scroll menu
- **d.** scroll file

Think Critically

Directions: *Answer the following questions.*

1. Why might a programmer choose to release software as open-source instead of as proprietary?

2. Why should you check a program's system requirements before purchasing it?

3. Why is it important to uninstall a program you no longer use?

4. What is the difference between the New and Open commands on the File menu?

5. Why does an application window include tools such as scroll bars, scroll boxes, and scroll arrows?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. The computer desktop shows many different types of icons. Icons can represent applications, files, or file folders. Experiment with a Macintosh or Microsoft Windows operating system. Make a three-column chart of the icons that appear on the desktop. Include a description of what happens when each icon is clicked, and identify what type of file or program the particular icon represents.

B. Several types of application software are listed in this chapter. They include word processors, spreadsheets, databases, presentation graphics, telecommunications, and personal information managers. Using the Internet or other resources, prepare a report that evaluates, compares, and contrasts at least two types of application software that you may use based on their appropriateness for a task, licensing agreements, and available support. As you work, take notes and keep track of your sources. Include a list of sources or bibliography with your report. Evaluate the information you find and only use it if it is accurate, relevant, and valid. Share your report with the class.

Chapter 10

Use the Vocabulary

Directions: *Match each vocabulary term in the left column with the correct definition in the right column.*

_____ **1.**	vertical application	**a.**	permission to install software on multiple computers
_____ **2.**	horizontal application	**b.**	main area of a program window
_____ **3.**	beta version	**c.**	a program designed for a limited purpose
_____ **4.**	copy protection	**d.**	a general-purpose program that can be used by a variety of users
_____ **5.**	documentation	**e.**	tool that keeps a user from making unauthorized copies of software
_____ **6.**	version	**f.**	instructions that make using software easier
_____ **7.**	site license	**g.**	to change the size of the data on the screen
_____ **8.**	application workspace	**h.**	test copy of software that companies use to find errors
_____ **9.**	zoom	**i.**	setting defined by the computer user
_____ **10.**	preference	**j.**	copy of software that may have new features

Check Your Comprehension

Directions: *Determine the correct choice for each of the following.*

1. Which of the following is an example of a vertical application?
- **a.** an Internet browser
- **b.** a library card catalog
- **c.** a popular personal information manager
- **d.** an inexpensive spreadsheet

2. Which of the following is NOT an example of multitasking?
- **a.** switching from one program to another
- **b.** moving data to a different document
- **c.** keeping your desktop clear
- **d.** working in three or four applications at once

3. Software documentation can help you do which of the following?
- **a.** troubleshoot problems
- **b.** obtain a site license
- **c.** make an application vertical
- **d.** create a new version

4. Which of the following is NOT a characteristic of a maintenance release?
- **a.** minor revisions to existing features
- **b.** minor features added
- **c.** letter added to the version number
- **d.** significant improvements

5. Changing the zoom controls allows you to do which of the following?
- **a.** change the font of the data on the screen
- **b.** adjust the size of the data on the screen
- **c.** change the order in which the data is displayed on the screen
- **d.** adjust the document's margins

6. Which of the following menus would a word processor most likely have?
- **a.** Calculate
- **b.** Message
- **c.** Sound Controls
- **d.** Edit

Think Critically

Directions: *Answer the following questions.*

1. What are some consequences of violating copyright laws to both software companies and to users?

2. In what ways do beta versions help improve new software applications?

3. Why is good documentation important?

4. Why might a user choose to upgrade to a newer version of a particular software application?

5. How are the terms *default* and *preferences* related?

Extend Your Knowledge

Directions: *Choose and complete one of the following projects.*

A. Horizontal applications are popular types of software, such as word processors and Internet browsers, with which most computer users work. Vertical applications are designed for more specific activities. Interview two adults who use computers for their jobs. Identify the types of applications they use at work. What programs do they use that are specific to their careers or businesses? How do they use popular applications differently? For both types of software, to what extent do licensing agreements and customer service/technical support influence their purchasing decisions? Create a Venn diagram comparing your findings.

B. Several types of documentation are listed in this chapter, including printed material, help screens, and Web sites. Using the Internet or other resources, prepare a report that discusses documentation. Discuss the purpose of each type of documentation. How and when might you need to use each—now and in the future? What are some of the different features available in each type of documentation? Share your reports with the class.