Lesson 1
Computers and Computer Literacy
Presentation and Assignment

Objectives

- Discuss the history of computers
- Define the term computer and describe a computer system
- Define the different computer classification categories
- Describe the two types of computer software
- Describe communications and networks
- Identify how we use computers and technology in our daily lives

Vocabulary

- clients
- computer
- data
- desktop computer
- electronic communication
- embedded computer
- extranet
- hardware
- icon
- information
- Internet
- intranet
- mobile devices

Vocabulary (continued)

- network
- nodes
- personal computers
- servers
- software
- supercomputer
- users

Introducing Computers

- Considered one of the most important inventions of the 20th century, computers have become prevalent throughout our society.
  - Computers are found everywhere—from cell phones with embedded cameras to computerized components in automobiles to our ATM machines.
  - Computers help us learn about health and medicine, space and time, and matter and energy, to name just a few topics.
- The ways in which a computer can be used are as limitless as a person's imagination.

A Brief History of the Computer

- Computers were developed in the late 1940s and early 1950s, and were designed initially for military and governmental uses.

- The microprocessor was developed in 1971 by Dr. Ted Hoff, who at that time worked for Intel.
- Using the microprocessor technology, Steve Jobs and Steve Wozniak built the first Apple computer.
- In 1980, Bill Gates worked with IBM to develop the disc operating system for the IBM PC.

A Brief History of the Computer (continued)

- Early computers

Computers and Computer Systems

- A computer is an electronic device that receives data (input), processes data, stores data, and produces a result (output).
- The instructions and/or programs that control the

computer are called software.

- The physical parts of the system are called hardware.
- A computer processes data and produces information.
- The Input, Processing, Storing, and Output sequence is referred to as the information processing cycle.
- Information processing cycle

How Computers Work

- Computers are not intelligent and do only what we ask them to do.
- Computer benefits: speed, reliability, accuracy, storage, and communications.
- Computer disadvantages: environmental impact and pollution, violation of privacy, identity theft, health risks, and outsourcing of jobs to foreign

countries.

Classifying Computers

- Special-purpose computers are used to control other objects such as telephones, appliances, and scientific experiments.
- General-purpose computers categories are based on size, function, cost, and performance and include: desktop, mobile, midrange, mainframe, and super computers.
- Different types of computers

Computer Software

- Application software and system software are the two basic types of software.

- Windows is an example of an operating system, and Word and Excel are examples of application software.
- An icon is a small image that represents a file, command, or another computer function.
- Most software has a graphical user interface (GUI, pronounced “gooey”).

Communications and Networks

- Electronic communications is what makes it possible for computers to communicate with each other and with other devices.
- The establishment of ARPANET led to the process of electronic communications.
- To communicate electronically requires four

components: sender, receiver, channel, and protocol.

Networks:

- Two or more computer systems linked together are considered a network.
- Networks can be small or large.
- Computers on a network are called clients or nodes. Servers allocate resources.
- Networks are covered in detail in Lesson 7.
- A network connecting users through various communications devices

Intranets and Extranets:

- An intranet is a network for the exclusive use of employees within a company or organization.

- An extranet allows specified outside organizations to access a company's intranet.

The Internet

- The Internet evolved from ARPANET. This large, wide-area network was established in 1969 and was created by the U.S. Defense Department.
- The Internet and World Wide Web are covered in detail in Lesson 2.

Technology for Everyday Live

- Examples of ways in which technology affects the lives of many people are through…
  - school and education

- security systems
- government
- television
- games
- home systems

Computers in Our Future

- Computers in the future will become smaller and more mobile.
- Wireless and mobile devices will become the norm.
- Computer literacy, whish the knowledge and understanding of computers and their uses, will become even more important.

Summary

In this lesson, you learned:

- Computers have been around for more than 60 years.
- A computer is an electronic device that receives data, processes data, produces information, and stores the data and information.
- A computer derives its power from its speed, reliability, accuracy, storage, and communications capability.

Summary

- Computer classifications include personal computers (desktop and notebook), mobile

devices, servers, mainframes, supercomputers, and embedded computers.

- The two basic types of software are application software and system software.
- Electronic communication enables computers to communicate with each other and other devices.

Summary

- A network is a group of two or more connected computers, an intranet is a closed network within an organization, and an extranet is a closed network for an organization and its customers and suppliers.
- The Internet is the world’s largest network.
- Computers and technology affect almost every facet of our daily lives.

- Computers in our future are likely to be more powerful and less expensive.
- Computer literacy is the ability to use a computer and its software to accomplish practical tasks.

Complete after viewing the presentation.

Lesson 1: Computers and Computer Literacy Assignment

TRUE/FALSE

1. Many people consider the computer to be the single most important invention of the 20th century.

2. In 1961, Dr. Ted Hoff developed the microprocessor.

3. Data is text, numbers, sound, images, or video.

4. A computer performs only two operations: arithmetic computations and logical operations.

5. Special-purpose computers are divided into categories that include desktop computers and mobile devices.

6. Software is also called programs.

7. System software is a set of programs that perform specific tasks for users, such as word processing.

8. An icon is a small image that represents a file, command, or another computer function.

9. The Switch User option closes any open programs and logs off.

10. A network is a group of four or more computer systems linked together via communications devices.

MULTIPLE CHOICE

1. Steve Jobs and Steve Wozniak built the first Apple computer in ____.
   a. 1957
   b. 1967
   c. 1976
   d. 1987

2. ____ consists of instructions or programs for controlling the computer.
   a. Software
   b. People
   c. Hardware
   d. Data

3. The information processing cycle includes inputting the data, processing the data, ____, and outputting information.
   a. logical operations
   b. compressing data
   c. storing data and information
   d. arithmetic computations

4. An example of an arithmetic operation is the ____ operation.
   a. equal to
   b. addition
   c. greater than
   d. retrieval of a number

5. An advantage of using a computer is ____.
   a. speed
   b. accuracy
   c. storage
   d. all of the above

6. ____ generally fit into the palm of your hand.
   a. Mobile devices
   b. Microcomputers
   c. Supercomputers
   d. Pocket devices

7. A ____ is a large, expensive computer, capable of supporting hundreds or even thousands of users.
   a. notebook computer
   b. microcomputer
   c. PDA
   d. mainframe computer

8. General-purpose computers are divided into categories, based on their physical size, function, ____, and performance.
   a. color
   b. manufacturer
   c. brand
   d. cost

9. Most software has a ____ user interface.
   a. command-line
   b. graphical
   c. text-based
   d. mouse-based

10. To execute a command associated with an icon you would click or ____ the icon.
   a. hover over
   b. double-click
   c. drag
   d. rename

11. To access Notepad you would point to All Programs, click ____, and then point to Notepad.
   a. Control Panel
   b. Accessories
   c. Microsoft Office
   d. Windows Gallery

12. The ____ option is for changing users without logging off or closing the computer.
   a. Switch User
   b. Log Off
   c. Lock
   d. Sleep

13. ____ saves open documents to your hard disk and then puts the computer in a low-power state.
   a. Sleep
   b. Switch User
   c. Lock
   d. Hibernate

14. ____ temporarily locks the computer and prevents others from viewing your work or accessing the system.
   a. Temporary Lock
   b. Switch User
   c. Lock
   d. Hibernate

15. ____ closes any open programs and logs off.
   a. Log Off
   b. Switch User
   c. Lock
   d. Hibernate

16. ____ communication is the technology that enables computers to communicate with each other and other devices.
   a. Electronic
   b. Radar
   c. DOS
   d. Channel

17. On Labor Day in 1969, the first message was sent via ____ from a computer at UCLA to another computer at Stanford Research Center.
   a. wireless communication
   b. telephone lines
   c. servers
   d. cable

18. ____ was a large wide-area network created by the United States government, and served as the testing group for new networking technology.
    a. INTERNET
    b. SAM
    c. ARPANET
    d. ARANET

19. A network is a group of ____ or more computers linked together via communications devices.
    a. two
    b. three
    c. four
    d. five

20. A(n) ____ is a network for the exclusive use of workers within an organization and contains company information.
    a. intranet
    b. extranet
    c. server
    d. portal

CASE 1.1

Michael is in charge of purchasing computers for his company. He is putting together a short presentation for management describing the different types of computers and his recommendations for the company. Please refer to Figure 1-1 as you answer the questions below.

FIGURE 1-1

21. Michael is excited about the idea that he can actually bring in an example of a mobile device that can connect wirelessly to the Internet. Michael would choose to bring the computer numbered ____ in Figure 1-1.
    a. 1
    b. 2
    c. 3
    d. 4

22. Michael also wants to show his audience a picture of an embedded computer which can be found in a variety of devices. Michael would show the audience a picture of the computer numbered ____ in Figure 1-1.
    a. 1
    b. 2
    c. 3
    d. 4

CASE 1.2

Serena was leading a taskforce at her company to make decisions on the company's Internet, intranet, and extranet policies. In preparation for a meeting, she collected questions from her co-workers.

23. Jim, from Human Resources, asked, "If I want only employees to see detailed information on our benefits, what type of network would I use?"
    a. intranet
    c. server

b. extranet
d. Internet

24. Michelle from Purchasing asked, "I have compiled a list of specifications for products that our company buys. I would like my vendors to access this information. What type of network would I use?"
a. intranet
c. server
b. extranet
d. Internet

COMPLETION

1. In 1971, Dr. Ted Hoff developed the _____.

   ANS: microprocessor

2. A(n) _____ is an electronic device that receives data, processes data, stores data, and produces a result.

   ANS: computer

3. _____ computations include adding, subtracting, and dividing numbers.

   ANS: Arithmetic

4. _____ computers are used to control devices such as dishwashers and airport radar systems.

   ANS: Special-purpose

5. _____ are systems that allow outside organizations to access a company's internal information system.

   ANS: Extranets

MODIFIED TRUE/FALSE

1. Hardware consists of instructions or programs for controlling the computer. _____

2. AND, OR, and NOT are arithmetic operators. _____

3. A desktop computer is designed so that all components fit on or under a desk. _____

4. Nodes are computers that allocate resources on a network. _____

5. The Internet is the world's largest network, evolved from ARPANET. _____

MATCHING

Please identify the letter of the choice that best matches the numbered definitions below.

a. information
b. data
c. users
d. clients
e. Internet

1. World's largest network
2. Computer output
3. People who use computers
4. Computer input such as text and numbers
5. Computers on a network