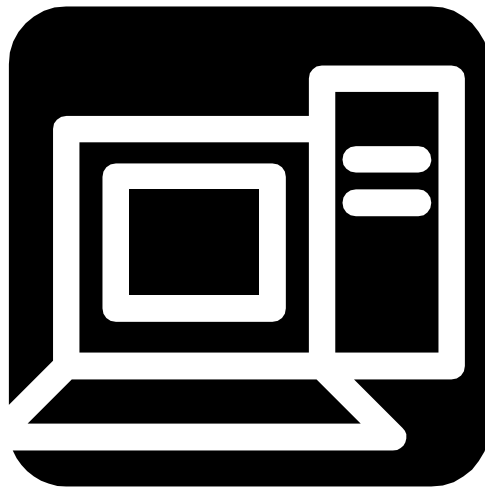

Computer Basics Trainee's Guide



COMPUTER BASICS

Overview

Computers have become an essential part of today's workplace. Employees must know computer basics to accomplish their daily tasks. This mini course was developed with the beginner in mind and is designed to provide WTP trainees with basic knowledge of computer hardware, some software applications, basic knowledge of how a computer works, and to give them hands-on experience in its use. The course is designed to "answer such basic questions as what personal computers are and what they can do," and to assist WTP trainees in mastering the basics.

The PC Novice dictionary defines a computer as a machine that accepts input, processes it according to specified rules, and produces output. Further noted is that early computers were based upon vacuum tubes and were massive instruments. By the 1960s, the vacuum tubes were replaced by transistors, which allowed the computer to be smaller. Then, by the mid 1970s, circuits were printed on a single chip, and smaller, faster, less expensive computers were developed, allowing the spread to businesses and homes. Of course, today computers are faster, are able to perform more highly complicated functions, and are much more user friendly.

In a computer workshop conducted for the Deep South Center for Environmental Justice, Mrs. Florence Robinson noted in her manual that a computer extends the memory so that you can remember much more for a much longer time. You can calculate much more complicated numbers in a much shorter period of time.

Below is her list of things you can do with a computer:

- Make flyers
- Keep mailing lists
- Print out addresses
- Type and save your resume
- Visit the Internet and get information from other computers, and the list is endless.
- Type newsletters
- Send faxes
- Keep budgets
- Prepare educational materials

There are two basic types of computers with which we are all familiar.

- Apples or MacIntosh computers - computers designed by Apple, Inc.
- IBM and IBM/IBM-compatible computers (computers that adhere to standards set by IBM).

This is a Windows/Microsoft Office based course, designed mainly for the IBM/IBM compatible computer but is adaptable to the Apple/MacIntosh computer.

COMPUTER BASICS

Day 1

Orientation/Basic Concepts and Terms

- A. Computer Basics Pre Test
- B. The computer
- C. Main computer components
 - 1. Input Devices
 - a. Keyboard
 - b. Mouse
 - 2. The Processor Unit
 - 3. Output Devices
 - a. Printers
 - b. Monitors
 - 4. Auxiliary Storage
- D. Peripheral Devices

Day 2

Windows 95/98

- A. Introduction
- B. Starting Windows
- C. The Taskbar
- D. The Start Button
- E. The Desktop
 - 1. My Computer
 - 2. Recycle Bin
 - 3. Network Neighborhood
- F. Exiting Windows
- G. Using Online Help
- H. Windows Application Programs
 - 1. Introduction
 - 2. Tasks
 - 3. Windows and Application Programs
 - 4. Using Application Programs

Day 3

Word Processing

- A. Word Processing Defined
- B. Accessing Microsoft Word (MS Word)
- C. Working in MS Word
- D. Printing A Document
- E. Creating A Document in MS Word
- F. Printing A Document in MS Word
- G. Exiting MS Word

Day 4

Internet Basics

- A. The Internet
- B. The World Wide Web
- C. Internet Service Providers/Online Services
- D. Web Browsers
- E. Search Engines
- F. E-Mail
- H. Web Sites and URLs

Day 5

Activities

Day 6

Activities

COMPUTER BASICS

Day 1

Orientation/Basic Concepts and Terms

Computer Basics Pre Test

What is a computer?

Main computer components

Input Devices

Keyboard

Alphabetic Keys

Numeric Keypad

Action Keys

Function Keys

The Mouse

The Processor Unit

The Central Processing Unit

Memory

Random Access Memory

Read-Only Memory

Output Devices

Printers

Dot-Matrix Printers

Inkjet Printers

Laser Printers

Computer Screens (Monitors)

Auxiliary Storage

Diskette

Hard Disk

CD

Zip Disk

Jaz Disk

Magnetic Tape

Peripheral Devices

Scanner

Speakers

Modem

Microphone

Digital Video PC Camera

Digital Photography Camera

COMPUTER BASICS

Orientation/Basic Concepts and Terms

Objective

The trainee will be able to:

- Define computer and other basic computer terms
- Identify the main components of a computer (input devices, output devices and auxiliary storage devices) and explain their function
- Identify peripheral computer devices and explain their function

What is a computer?



A computer is an electronic device, operating under the control of instructions stored in its own memory unit, can accept data (**input**), is able to **process** data arithmetically and logically, produce **output** from the processing, and **store** the results for future use.

What does a computer do?

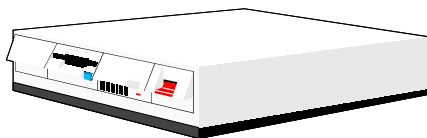
Computers can perform four general operations. These operations comprise the information processing cycle and are: **input**, **process**, **output**, and **storage**. Collectively, these operations describe the procedures a computer performs to process data into information and store it for future use.

How does a computer know what to do?

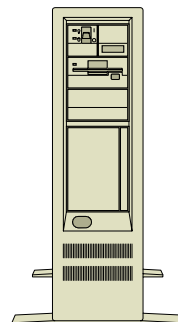
For a computer to perform the operations in the information processing cycle, it must be given detailed set of instructions that tell it exactly what to do. These instructions are called a **computer program**, or **software**. This program must be stored in the computer. Then, the computer just executes one program instruction after another until the job is complete.

What's in the Box? [The Computer Case]

This is the unimpressive “**box**” that has a few slit-like openings on the front, and strange-looking outlets on the back. Some computers are called “**towers**” because they are much taller than they are wide.



Desktop Case



Tower Case

The case contains the **system unit** or **computer processor**. The system unit holds the **hard drive**, also known as the **C drive**. The unit also contains the **central processing unit** that sorts through all of the information given to the

computer, and performs the functions based on the commands you input. The system unit serves as a permanent storage place (**memory**) for information you have given the computer.

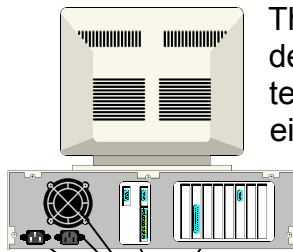
In the front of the computer will be found one or more slots called “**floppy disk drives**.” If only one is present, the drive is commonly called the “A drive.” They are A and B drives when two are present. One drive is for small (3.5”) diskettes and the other is for the larger (5.25”) diskettes. A third disk drive, the **CD ROM**, is now standard on computers. **CD-ROM** disks are round and store large amounts of memory.



3.5” Floppy Drive

CD-Rom Drive

On the back of the system unit case will be found connector sites, “**ports**.”



Ports

These ports allow you to link your computer to other devices, such as printers, the monitor, the mouse, scanners, telephone lines, speakers and microphones. **Ports** are either **serial** or **parallel**. The printer is usually attached to the parallel port called **LPT1**. A **serial port** is the connection point for a serial interface (one that transfers digital information **one bit at a time**). A **parallel port** allows **more than one bit** of data to be transmitted.

Components of a Computer

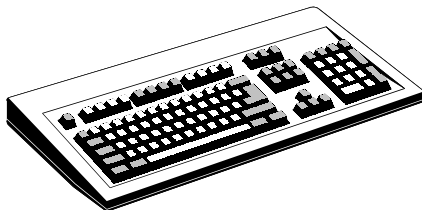
The four primary components of a computer are: **input devices**, the **processor unit**, **output devices**, and auxiliary **storage units**. Other components considered here are listed as peripheral devices.

Input Devices

Input devices enter data into the main memory. Many input devices exist. The two most commonly used are the **keyboard** and the **mouse**.

The Keyboard

Data is entered by manually keying or typing when the keyboard is used. On the keyboard, the **alphabetic keys** are usually arranged like those on a typewriter. The **numeric keypad** is located on the right side of the keyboard, and allows you to enter numeric data. The numeric keypad is activated by pressing the **NUMLOCK** key. When it is activated, the



likeness of a calculator appears on the monitor, and the keys have a numeric function.

There are several major **action keys** with which you should be familiar. The **cursor** is a symbol, such as a flashing line, which indicates on the monitor where you are working within the document. The **arrow keys** control the cursor and allow you to move the cursor around the monitor screen.

The **UP ARROW** (↑) key causes the cursor to move upward on the monitor and in the document.

The **DOWN ARROW** (↓) key causes the cursor to move down.

The **LEFT ARROW** (←) and **RIGHT ARROW** (→) keys cause the cursor to move left and right on the screen and in the document. There are two sets of arrow keys, one on the numeric keypad and the other between the numeric keypad and the typewriter keys. To use the cursor keys on the numeric keypad, the **NUMLOCK key** must be disengaged. A light will come on to indicate that the **NUMLOCK key** is engaged.

Function keys denoted by the letters **F1 - F12**, located at the top of the keyboard, can be programmed to accomplish specific tasks. For example, the **F1** is usually used as the **Help key**. Whenever the F1 key is pressed, messages display that give instructions to help the user.

Shift keys have several functions. The keys work just as they do on a typewriter, allowing you to type capital letters. Also, the **Shift key** is always used to type the symbol located on the upper portion of any key. The **Shift key** lets you switch between numeric and character mode for using the character keys on the numeric keypad.

The **Caps lock key** will allow you to type all capital letters without pressing and holding the **Shift key**.

The **(CTRL) key** and the **(ALT) key** are used to alter the other keys. When these keys are used, it is best to first press the key, then before releasing it, press the other key.

The **BACKSPACE key**, the **TAB key**, the **INSERT key** and the **DELETE key** all perform the functions their names indicate. The use of the **ESC (escape) key** varies with the software package.

The **HOME key** will move the cursor to the beginning of a document. The **END key** will move the cursor to the end of a document. The **PAGE UP key (PGUP)** will move the cursor up through an entire page of a document. The **PAGE DOWN (PGDN) key** moves the cursor down through an entire page of a document.

The **ENTER key** may be used to perform whatever function is indicated by highlighted or a typed command. It may also be used as a **Return key** to take the cursor to a new line or paragraph in the document.

The Mouse

The mouse is a **pointing device** you can use instead of the cursor control keys. You lay the palm of your hand over the mouse and move it across the surface of a pad that provides traction for a rolling ball on the bottom of the mouse. The mouse detects the direction of the ball movement and sends this information to the screen to move the cursor. There are also buttons on the top of the mouse that can be pressed (**clicked**) to indicate your choice of actions from lists or icons displayed on the monitor screen. There are four basic actions taken with the mouse. Using the **left button**, you may (1) **click**, (2) **double click**, (3) **click and drag**, and using the right button, (4) **right click**.



The Processor Unit

The Central Processing Unit

The processor unit is composed of the central processing unit and main memory. The **central processing unit (CPU)**, a chip called the **microprocessor**, interprets instructions to the computer, performs the logical and arithmetic processing operations, and causes the **input** and **output** operations to occur.

Random Access Memory

The **main memory**, also called **random access memory (RAM)**, contains electronic components that store data including numbers, letters of the alphabet, graphics and sound. Any data to be processed must be stored in **main memory**. The amount of **main memory** in a computer is typically measured in kilobytes (**KB**) or megabytes (**MB**). One megabyte equals approximately 1 million memory locations and can hold approximately 500 pages of text information. **RAM** is an area in the computer system unit that temporarily holds data before it is processed. This memory is volatile, that is, if the computer is turned off or if power is lost, all data stored in **RAM** is instantly and permanently lost.

RAM stores user data, operating system instructions and program instructions, all necessary for the computer to process any data. Every time the computer is turned on, it copies a set of operating system instructions from **disk** to **RAM**, and they remain in **RAM** until the computer is turned off.

You might think you would run out of memory if several programs are running at the same time; however, the computer uses space on the **hard disk** as an

extension of **RAM**. The ability to use the space to simulate **RAM** is called **virtual memory**.

Read only Memory

Read only memory or ROM is a set of chips containing instructions that help a computer prepare for processing tasks. The instructions in **ROM** are permanent, and the only way to change **ROM** is to replace the chips with another set. This is important because, when the computer is first turned on, **RAM** is empty. However, **ROM** contains a small set of instructions that tell the computer how to access the disk drives and look for the operating system. When the computer is first turned on, the **CPU** performs a series of steps by following the instructions stored in **ROM**. This series of steps is called the **boot process**.

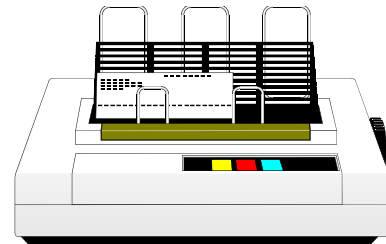
Output Devices

Output devices make the information resulting from the processing available for use. The two output devices most commonly used are the printer and the Monitor or **CRT (cathode ray tube)**, a television-like display device.

Printers

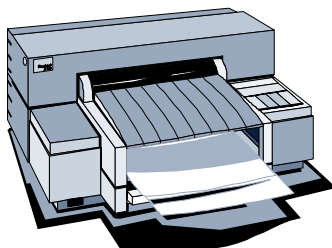
Printers may be either **impact printers** (prints by striking an inked ribbon against the paper), or **non-impact printers**.

The **Dot matrix printer** is one type of **impact printer**. To print, it generates a dot pattern representing a particular character. Speeds may range from 50 to more than 300 characters per second. Generally, the dot matrix printer has the advantage of lowest per page operating cost.

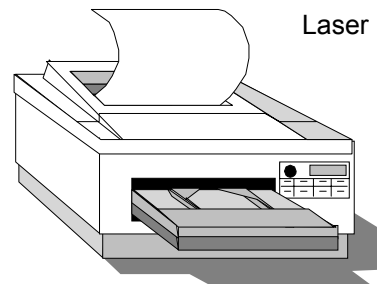


Dot Matrix Printer

An **Ink jet printer** is a **non-impact printer**, which forms characters by using a nozzle that sprays drops of ink onto the page. Ink jet printers produce relatively high-quality images and are faster than the dot matrix, producing about six (6) pages per minute in black and white and about three (3) pages per minute in color. They now have greatly improved quality, and often produce output very near the quality of laser printers.



Inkjet Printer

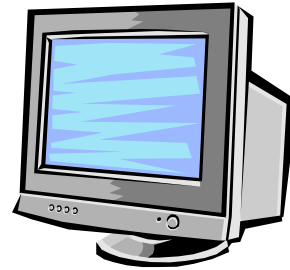


Laser Printer

The **laser printer** is also a **non-impact printer**. It works similar to a copying machine by converting data from the computer into a beam of light that is focused on a photo conductor drum, forming the images to be printed. The photo conductor attracts particles of toner that are fused by heat and pressure onto paper to produce an image. It produces very high quality output and can print four (4) to sixteen (16) pages per minute.

Computer Monitor

Most full size personal computers use a TV-like display device called a **screen, monitor or CRT (cathode ray tube)**. The **monitor** is the video display screen and the hard shell that holds it. A **monitor** may be **monochrome** (uses only two colors - black and white, or black and amber, or black and green to display characters). **Color monitors** display images of color and may include **Color/Graphics Adapter (CGA)**, **Enhanced Graphics Adapter (EGA)**, **Video Graphics Array (VGA)** and **Super VGA (SVGA)**. The number of colors displayed and the quality of the image depend upon the type of monitor used.



Laptop
Computer



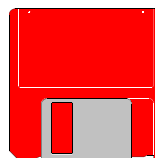
Laptop computers have flat panel displays that use **liquid crystal display (LCD) technology**. Special molecules in the screen have the ability to bend and twist to create desired images. The display may be **monochrome** (appears gray) or **color**. The three basic types are **passive matrix**, **dual scan**, and **active matrix**.

Auxiliary Storage

Auxiliary storage devices are used to store instructions and data when they are not being used in **main memory**. Two types of **auxiliary storage** most often used on personal computers are **floppy diskettes** and **hard disks**. **Re-writeable CDs** and **zip disks** also have recently become common devices for storage. Tape drives have long been the standard back-up devices.

The Floppy Disk

A **diskette** is a circular piece of oxide-coated plastic that stores data as magnetic spots. The **diskettes** are available in various sizes and storage capacities.



3.5" Floppy Disk/
diskette

The number of characters that can be stored on a **diskette** depends on two factors: (1) the recording density of the bits on the track, and (2) the number of tracks on the **diskette**. Most personal computers use the **3 ½ inch diskette**, which stores from 720,000 bytes to 1.44 million bytes of data. An added benefit of the **3 ½ inch diskette** is its rigid plastic housing that protects the magnetic surface of the **diskette**.

To read data stored on a **diskette** or to store data on a **diskette**, you insert the **diskette** in a disk drive. You can tell that the computer is reading or writing data because a light on the disk drive will come on while this is taking place. **Do not** try to insert or remove a diskette when the light is on; this may result in permanent damage to the data stored on the diskette.

The Hard Disk

Another form of **auxiliary storage** is a **hard disk**, which consists of one or more rigid metal platters coated with a metal oxide material that allows data to be magnetically recorded on the surface of the platters. Usually, the **hard disk** cannot be removed from the computer, however they are now available in removable cartridge form. The **hard disk** platters spin at a high rate of speed, typically 3,600 revolutions per minute.

When **reading data** from the disk, the **read head** senses the magnetic spots that are recorded on the disk, along the various tracks, and transfers that data to **main memory**. When **writing**, the data is transferred from **main memory** and is stored as magnetic spots on the tracks on the recording surface of one or more of the disk platters. On the **hard disk**, the read/write heads do not actually touch the surface of the disk.

CD-ROM Disks

Compact disks, **CD-ROM disks**, can store more than 600 million bytes of data, the equivalent of 300,000 pages of text. A recent technological development

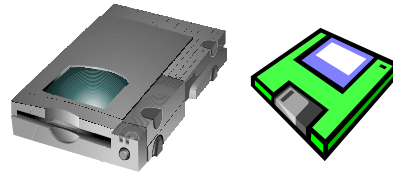


CD-ROM
Compact Disk

(**CD-R**) allows the computer to record data on the **CD-R disk** using a special **CD** recording device. Disks that have been produced with the CD-R device can be used on a regular **CD-ROM drive**. On a regular **CD-ROM disk**, the data cannot be erased or modified. **CD-rewritable disks** can be erased and reused. They have about a 10-year life span and can be overwritten 10,000 times. This technology was developed as a result of the collaboration among 10 companies, including IBM, Hewlett-Packard, Phillips and Sony.

The Zip Disk

The **zip disk** is used like a floppy disk, but is able to store 100 Mb of data per disk as opposed to the 1.44 Mb capacity of the 3.5" diskette. A special drive, the **zip drive**, is a necessary peripheral for accessing the **zip disks**. This drive was introduced by the Iomega company. An even larger capacity **zip disk**, manufactured by another company, stores up to 120 Mb of data, but also requires a special peripheral drive. Iomega makes another disk and associated drive, the **Jaz disk and drive**, the capacity of which is 1 gigabyte of data storage capacity.



Zip Drive

Zip Disk

The Tape Drive

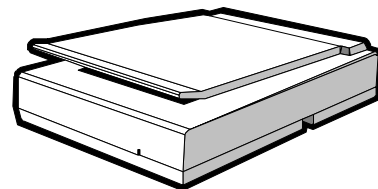
The old standard storage peripheral is the **tape drive** and is still in use today. The major drawback of the tape drive was the inability to access data as desired. What was required was that you download or look at all the data stored in order to access the portion you wanted. So, its main utility was daily **back-up** of all data on the hard drive, just in case you experienced a hard drive crash.

Peripheral Devices

Peripheral devices allow you to **expand and modify** your basic computer system. You may add **storage capacity**, install a different **mouse** or **keyboard** than the original or add a special utility device such as a **printer** or **scanner**. When installing these devices, you should carefully follow the instructions and make sure the computer is turned off before you attempt to connect it. You also may need to install special software that helps the computer control a **peripheral device**, called a **device driver**. Once the **device driver** is installed, the computer uses it to communicate with the **peripheral device**.

The Scanner

A **scanner** is an input device, which allows you to make a **photocopy** of text or an image and convert it to a **graphics file** or **text-based file**. After a **text file** has been translated using **optical character recognition (OCR)** software, it can be edited just as if you had typed it yourself. **Scanners** may be flatbed (the object to be scanned is placed on a glass surface, similar to a copy machine); or sheet fed (the object to be scanned is inserted into a component that moves it through the scanner); or it may be handheld (you actually move the scanner across the object to be scanned).



Speakers

Speakers attach to the back of the computer and allow you to hear sounds.

Most computers have built-in **speakers**. However, the speakers are typically low-end and include one driver, which allows them to reproduce sound in the mid-range.

Better **speakers** are able to reproduce high sounds, mid-range sounds and low bass sounds.

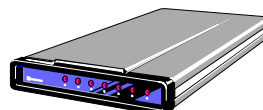


External Speakers

Modem

An **external modem** plugs into the **serial port** on the back of the computer, and a telephone line plugs into the back of the **modem**. It is the simplest to install since you don't have to insert it into anything inside the computer.

It has two main advantages over the **internal modem**. It has its own power supply, therefore it does not drain the power from the computer; and, its status lights can be used to determine when the connection to the internet has been lost.



External Modem

Microphone

You are able to communicate with others, computer to computer, or computer to telephone, if you have a **microphone** attached to your system, in addition to **speakers**.

The party or parties with whom you are communicating must have the same equipment, if you are communicating computer to computer. If you are communicating computer to telephone, one party simply uses the telephone.



Microphone

Digital Video PC Camera

This device makes a **video** recording of a person or persons, surroundings, etc. that it is fixed upon, so that two can speak face-to-face over the Internet. The person with whom you are communicating is visible on your computer monitor and you are visible on theirs. This device also provides for **videoconferencing**, where several individuals have an opportunity to communicate, each with the others.

Digital Photography Camera

The **digital camera** is handheld and captures photos that you can download to your computer directly from the camera.

Some **digital cameras** save images directly to a floppy disk, then the photos are downloaded from the disk to the computer.



Digital Camera

COMPUTER BASICS

Day 2

Windows 95/98

- Introduction
- Starting Windows
- The Taskbar
- The Start Button
- The Desktop
 - My Computer
 - Recycle Bin
 - Network Neighborhood
- Exiting Windows
- Using On-line Help
- Windows Application Programs
 - Introduction
 - Tasks
 - Windows and Application Programs
 - Windows Applications
 - WordPad
 - Notepad
 - Paint
 - Calculator
 - Character Map
 - Clipboard Viewer
 - Hyperterminal
 - Fax
 - Phone Dialer
 - Using Application Programs
 - Starting Programs
 - Closing Programs
 - Exploring Programs

COMPUTER BASICS

Windows

Objective

The trainee will be able to:

- Turn on the computer to properly start Windows
- Identify, access and use the major components of Windows
- Exit Windows properly
- Access and use On-line help in Windows
- Access and use the Windows Application Programs available on their computers

WINDOWS

Introduction

Although most of your computer time will be spent working with word processing, spreadsheet, database and other types of application programs, these programs can't run by themselves. To work, the computer must be running an **operating system**. This software coordinates all of the computer's functions and makes it possible for **application programs** to perform all of their functions such as opening, saving, formatting and printing files.

There are a number of popular operating systems, including **DOS**, **UNIX**, and **Apple System 7**. However, the most widely used operating system is **Microsoft Windows**. **Windows** is designed to make it easy to work with application programs. **Windows' Graphical User Interface** (also called a **GUI** – pronounced “goo-ey”) allows you to execute commands by clicking graphic buttons on the screen or clicking their names on pull-down menus. When you start an application program, it appears on the screen in a boxlike frame called a **window** (hence **Windows'** name).

Starting Windows

To use **Windows**, you just run on or **boot** the system, and Windows appears automatically. (The term **booting** comes from the expression “pulling yourself up by your bootstraps.”) Because Windows can be customized, the screens may look different from one computer to another.



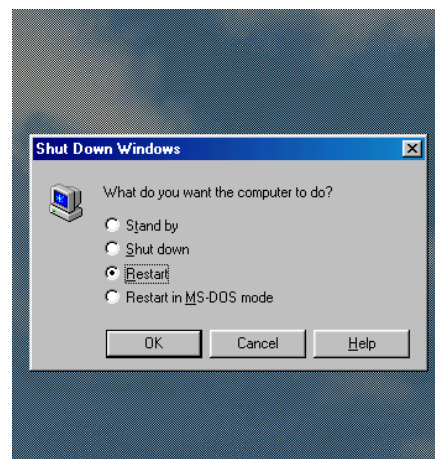
1. The **Taskbar** is the strip normally found at the bottom of the screen (it can be dragged to any of the four sides of the screen). It always displays the **Start** button and also displays buttons for all open application programs (some of which may be started automatically when you turn on your system). At the right end of the taskbar is a **notification area**. This area displays the time, but it will also display icons to indicate certain actions being performed. For example, a printer icon is displayed when you are printing documents.
2. Clicking the **Start Button** displays the **Start menu**. This menu lists a number of commands you can use to load programs, open documents, get help and change the setup of your system.

3. The **Desktop** is the area around and under the icons. This **desktop** is simply the space on the screen available for the display of Windows' various elements. As you'll see, you can add items to this electronic desktop, move items about on it, or take them away from it just as you can on the top of a real desk.
4. **Icons** on the **desktop** start application programs and other Windows resources. **An icon is the name for a small graphical image that represents something.** The most common **icons** include:
 - **My Computer** – gives you access to such items on your system as printers, disk drives, the control panel, and networks.
 - **Recycle Bin** stores any files you delete until you empty it. This allows you to easily recover any files you delete by mistake.
 - **Network Neighborhood** (not on all systems) gives you access to resources on your network (**several connected computers**), such as printers.

Exiting Windows

When you have finished for the day, you should always shut down **Windows** correctly and then turn off the system. **Windows** frequently creates temporary files on the disk. When you shut down correctly, these files are closed and all data is stored where it should be. If you just turn off the computer with **Windows** on the screen, you could corrupt your files.

1. Using the mouse, point to the **Start** button on the **taskbar** and click the left mouse button to display the **Start Menu**.
2. Using the mouse, point to the **Shut Down** command on the menu and click the left mouse button to display the **Shut Down Windows** dialog box. The dialog box offers you choices. The first, which is on by default, specifies that you want to **shut down** your system.

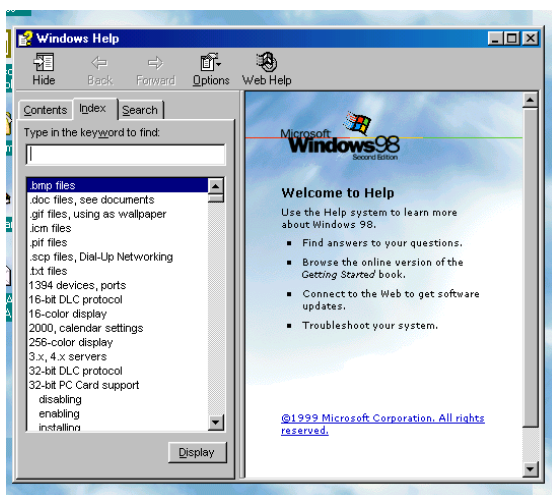


3. Using the mouse, point to the **OK** button in the dialog box and click the left mouse button. Wait for the screen to display the message, ***"It's now safe to turn off your computer."***
4. **Turn Off** the computer. Some systems will now turn off automatically.
5. Remove any disks from the floppy disk drives. This will prevent their loss, increase security and ensure that no one mistakenly erases them. Make sure you take your own disks with you.

Using On-Line Help

Windows has extensive **On-line Help** (on the computer) available from almost anywhere in any program. Help is organized into topics. You can think of them as sections in a book.

Starting Help



To look up Help, the first step is to start the Help program and display the Help Topics window. You can then use any one of three techniques to locate the information you need.

1. Click the **Start** button to display the Start menu.
2. Click on the **Help** command to display the Help Topics window.
3. Locate Help using the tabs **Contents**, **Index**, or **Find**. You may

see **hypertext links** within the **Help** windows that take you directly to other places. **Hypertext links** are simply **"hot spots"** you click to jump to another location. (You know you are pointing to a hypertext link when the mouse pointer turns into a pointing finger.)

- **Shortcut** buttons take you directly to the dialog box where you make the changes related to the Help topic.
 - **Pop-ups** are displayed when you click words with green underlines. Click in a pop-up or any area but a button or menu command to close it.
4. After locating and reading **Help**, do one of the following:
 - Pull down the **Options** menu and click the **Print Topic** command.

- Click the **Help Topics** button to return to the Help Topics window.
- Click the **Help** window's **Minimize** button to display it as a button on the taskbar. Clicking the button on the taskbar reopens the window.
- Click the **Help** window's **Close** button to close it.

The **Contents** tab lists topics grouped by subject much as the table of contents in a book.

The **Index** tab lets you look up topics much as you would in the index of a book.

The **Find** tab lets you search for words or phrases that might appear in a Help topic's title.

Introduction to Applications

The computer is a versatile machine. With it you can calculate a budget for your expenses, plot a graph of the results, and finding that you won't have enough money, write a letter to your boss, asking for a raise. Each of these tasks is an application. To perform each task, you load a specific type of **application program**.

Tasks and Application Programs

In one sense, the computer is like an actor, and application programs are like scripts. When the actor changes scripts, he or she can perform a different role. By changing application programs, you can make your computer perform different applications. **Being computer literate means that you understand how to use application programs to perform useful tasks.**

Windows and Application Programs

Although you do most of your work with **application programs**, **Windows** is your gateway to those applications. It has a number of features that make this possible and enhance the performance of application programs. For example:

- **Windows** gives a common look to programs that are developed to be used with it. Most include pull-down menus that list commands you can choose and buttons you can click to perform tasks. **Standard commands and buttons start programs, call up help, save, open and print files, enter and edit data, and quit application programs.** This makes it easier to learn new programs because many of your existing skills are transferable from one Windows-based application program to another.

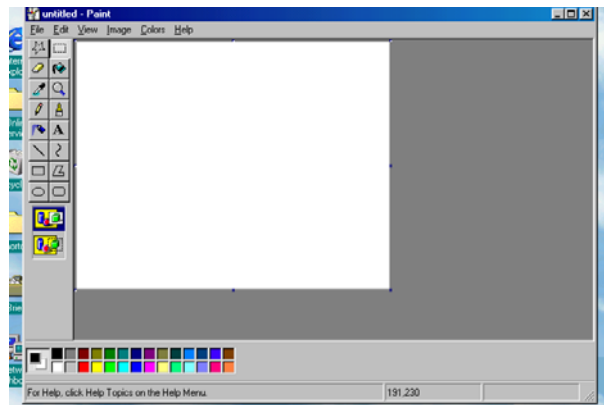
- **Windows** allows you to run more than one program at the same time. You can run a spreadsheet program in one window, and a word processing program in another, and work on either at any time.
- **Windows** makes it easy to copy or move data from one application to another. You can even create an illustration in one application program and copy it into a document created in another.

Windows Applications

Most **applications** that you use are purchased separately from **Windows**. However, **Windows** does include a number of its own applications, some of which are called **applets** because they are simplified versions of more powerful application programs.

A brief description of many of the programs that come free with **Windows** follows. Not all of these applications will be on all systems and you may have a number that aren't mentioned here.

- **WordPad** is a mini word processing program.
- **Notepad** is a similar, but simpler application used for very small files.
- **Paint** is a mini program used to work with **bitmap** images, such as photographs.
- **Calculator** is an electronic version of a pocket calculator.
- **Character Map** displays special characters such as ®, ™, ¼, » and ¶ that you can copy into a document.
- **Clipboard Viewer** stores data you copy or cut in one application so you can paste it elsewhere.



Windows communications application program allows you to communicate with other computers; it allows the computers to talk to one another.

- **HyperTerminal** connects you to **bulletin board systems (BBS)** running on other computers. It allows to computers to talk to one another.
- **Fax** sends and receives faxes and allows you to design a cover sheet.

- **Phone Dialer** dials phone numbers for you automatically.

Windows multimedia application programs allow you to play, create and edit sounds, movies and animations.

- **CD Player** plays music CDs that you put into the computer's CD drive.
- **Media Player** plays sounds, animations and movies in a window on the screen.
- **Sound Recorder** records, plays back, and edits sounds.

Windows system tools are included so you can perform maintenance tasks on your system's hard disks.

- **Backup** allows you to make backup copies of selected documents or folders or whole drives to **floppies**, **zip disks** or a **tape drive**.
- **Disk Defragmenter** moves parts of fragmented files back together so your drive works faster and file parts aren't lost. Files become fragmented when parts of them are scattered all over the disk.
- **ScanDisk** checks your hard disk for problems and corrects them.

Using Application Programs

Windows' job is to make it easy to operate and use **application programs** such as word processors, spreadsheets, and databases. To use any **Windows application program**, you must first start it. This may be called starting, opening, running, or launching the application. Starting a program loads it from the disk into the computer's memory and displays it on the screen. When a program is open, it always has a button on the taskbar with its name on it.

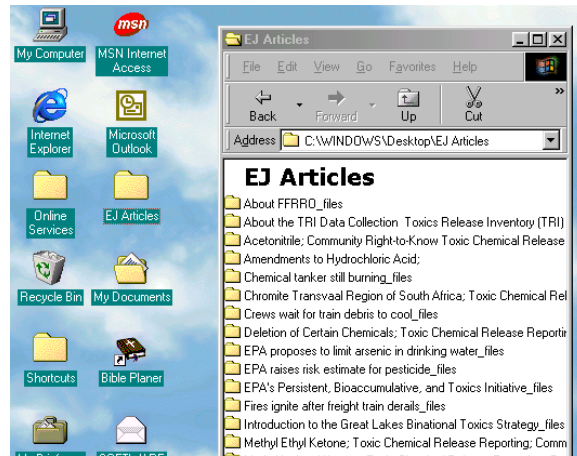
The most common way to start **Windows application programs** is to select them from the **Start Menu**. To display the **Start Menu**, you just click the **Start button** on the **Taskbar**. The Start menu that pops up lists commands you click to run programs, get help, and even change system settings.



When you click any name on this menu with an arrowhead next to it, or point to it and pause for a moment, a **sub-menu** appears or slides out, adjacent to the first menu. **This is called cascading.** Because it **cascades**, the **sub-menu** is called a **cascading menu**. When you click a name on the **sub-menu** or point to it and pause, another **sub-menu** may **cascade** from it.

Computer manuals usually list three objects related to **application programs**: **folders**, **programs** and **documents**.

- Clicking a **folder** displays another menu listing the folder's contents. (**A folder is what used to be called a directory.**) A folder's icon includes an image of a file folder.
- Clicking an **application program's** name or **icon** starts it. A program's icon includes an image representing the program.
- Clicking a **document** opens it, and if necessary, first starts the program that created it. A document's **icon** includes an image that looks like a page with a corner turned down or like a spiral notebook.



Starting Application Programs

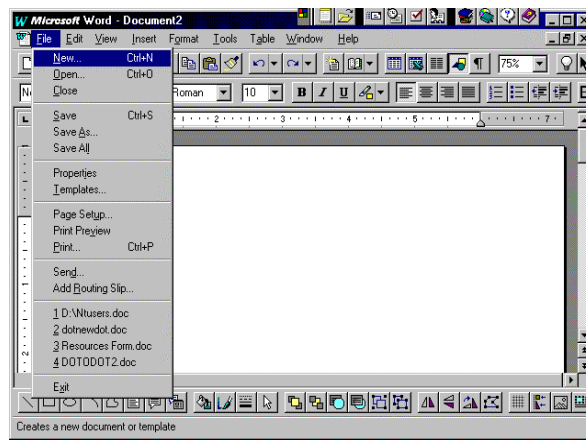
1. Click the **Start** button to display the **Start Menu**.
2. Point to the **Programs** folder or click it to **cascade** a menu listing the folders and programs on your system.
3. Click the name of an **application program** to start it, or point to any **folder** in which the application program is stored to **cascade** the menu. Then click the name of the **application program** listed on the **sub-menu**.

Closing Application Programs

When you are finished with an **application program**, you **close** it. This removes it from the computer's memory and removes its window from the desktop and its button from the taskbar. However, the application remains safely stored on the hard disk so you can start it again at any time.

It is important to close **application programs** using the **commands** designed for this purpose. They create **temporary files** on the disk while you are working, and these are **deleted** only if you **exit correctly**. If you quit **incorrectly**, your files may be left **damaged**.

You can close almost any window simply by clicking the Close button at



the far right of the title bar. To close an **application program**:

1. Click the **Close Button** at the far right of the application's title bar (**x**). There may be two **Close buttons** visible. Clicking the upper one closes the program; clicking the lower one closes the document.
2. You can also close the document or program using these procedures:
 - Left click on **File**. This pulls down the application's **File** menu and click the **Exit** command.
 - Right click the **application's button** on the **Taskbar** to display a shortcut menu, and click the **Close** command.
 - Double click the **application's icon** at the left of the **Title Bar**, or click the icon to display a **shortcut menu**, and then click the **Close** command.
 - Right click the **application's title bar** to display a **shortcut menu**, and then click the **Close** command.

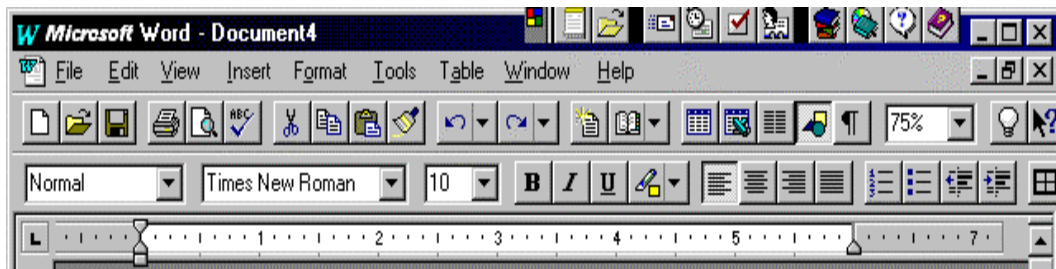
Exploring Application Programs

Application program windows vary from program to program, but they generally have a number of identical features. This makes it easy to learn new Windows-based **application programs** once you know one, because much of what you know transfers to the new program.

At the top of each **application program** window is a **Title Bar** that lists the name of the application running in the window or otherwise describes the window's contents. You can also right-click this **Title bar** to display a **shortcut menu** or use it to drag the window to a new position, using the mouse.

Every window displays three buttons at the right end of the title bar. A window can be any one of three sizes: **maximized** so it fills the entire screen, **minimized** so it appears only as a button on the taskbar, or **restored** to its original size to occupy only a part of the screen. You use the **Minimize**, **Maximize** and **Restore** buttons to change among these sizes.

To close a window, you may click the close button at the right. The **upper left corner** of every window displays the application's **icon** that displays a shortcut menu when you click it. You can also right-click the **Title Bar**. You can use commands on this menu to move or size the application's window. You can also double-click this icon to close the application.



A

Menu Bar immediately below the **Title Bar** displays the names of menus. These menus list commands that you execute to operate your program.

The toolbar below the **Menu Bar** contains buttons you can click to execute commands. The icons on the buttons indicate what they are used for, but you can also point to them to display their names.

COMPUTER BASICS

Day 3

Word Processing

Word processing Defined

Accessing MS Word

Working in MS Word

- The Document Page

 - The Menu Bar

 - The Title Bar

 - Standard and Formatting Toolbars

 - Document Views

Creating a Document in MS Word

- Spelling/Grammar Checker

- Importing Graphics

- Saving a Document in MS Word

 - Save As

 - Save

Printing a Document in MS Word

Exiting MS Word

COMPUTER BASICS

Word Processing

Objective

The trainee will be able to:

- Define Word Processing
- Properly access MS Word
- Identify and explain the function of the various areas of the document page
- Create a document in MS Word
- Import a graphic into a MS Word document
- Save a document in MS Word
- Print a document in MS Word
- Properly exit MS Word

WORD PROCESSING

Word Processing Defined

Word processing is creating, storing and printing documents using a computer software program known as a word processor. This software is an application program.

There are several application programs grouped together under the heading of Microsoft Office, which provide you with the capability to do different things. If you want to do word processing, you use Microsoft Word or MS Word. If you want to do a budget you might use Microsoft Excel. If you are setting up a presentation, the program to use is Microsoft Power Point. The database program is Microsoft Access.

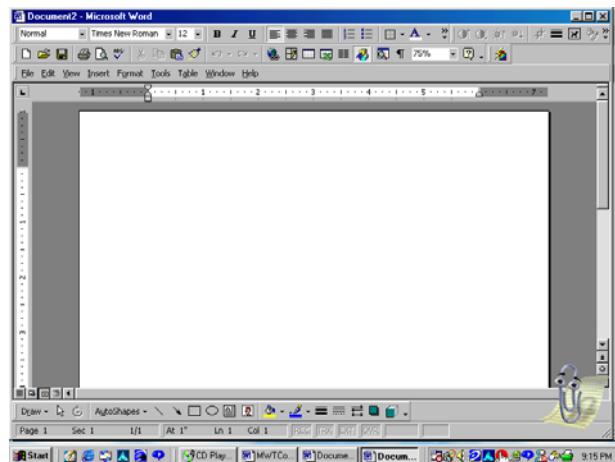
Accessing MS Word

You must first turn on the computer and have Windows running, then, you may access **MS Word** from the **Start** command or from a **Desktop Shortcut**. When you click on the **Start** button, a column appears. Move your cursor to **Programs**. A sub-menu will appear. Click on **Office**, then **MS Word** or you may move directly to **MS Word**. When you click on the MS Word button, the Word for Windows program will open and a screen appears. You may also access **MS Word** by clicking on its icon in the **Office Shortbar**. The **MS Word for Windows** program will open.

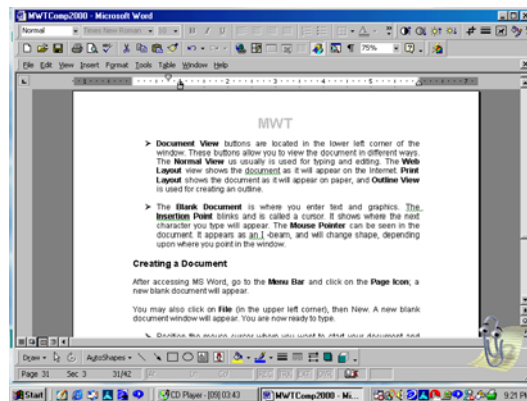
Working in MS Word

The screen that appears is called a window.

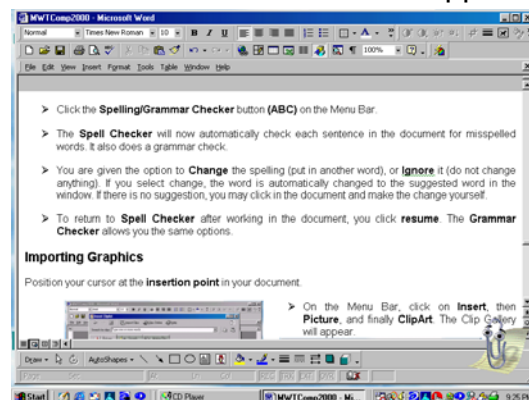
- The **MS Word Window** has several components. The **Menu Bar** is located at the top of the screen and provides access to all Word options.
- The **Title Bar** contains the document's name and the title **Microsoft Word**. The document name section will read **Document 1, 2, 3**, etc. until you give it a name.



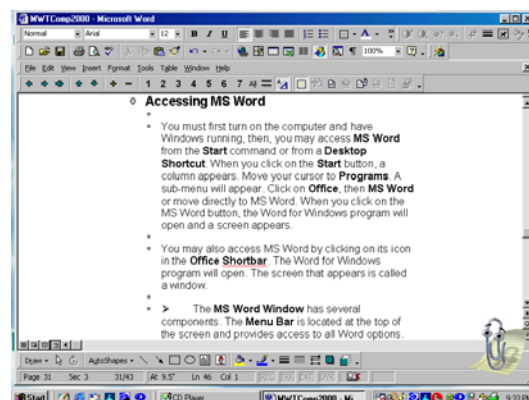
- **Standard and Formatting** toolbars are also located at the top of the **Menu Bar** and contain buttons that give quick access to various MS Word commands and features.
- **Document View Buttons** are located in the lower left corner of the window. These buttons allow you to view the document in different ways.
 - The **Normal View** generally is used for typing and editing.



- The **Web Layout View** shows the document as it will appear on the Internet.



- **Print Layout** shows the document as it will appear on paper.
- The **Outline View** is used for creating an outline.

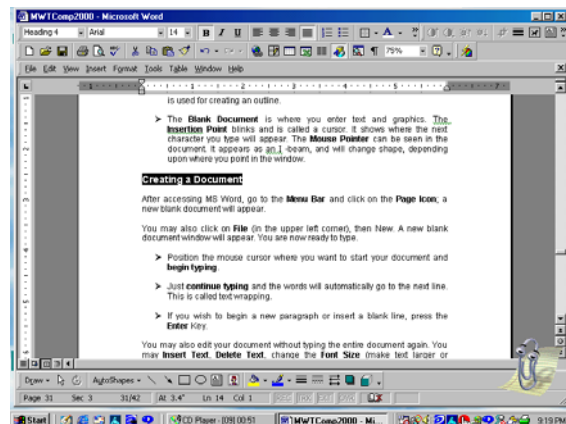


Creating a Document

After accessing MS Word, go to the **Menu Bar** and click on the **Page Icon**; a new blank document will appear.

You may also click on **File** (in the upper left corner), then **New**. A new blank document window will appear. You are now ready to type.

- The **Blank Document** is where you enter text and graphics. The **Insertion Point** blinks and is called a cursor. It shows where the next character you type will appear. The **Mouse Pointer** can be seen in the document. It appears as an I-beam, and will change shape, depending upon where you point in the window.

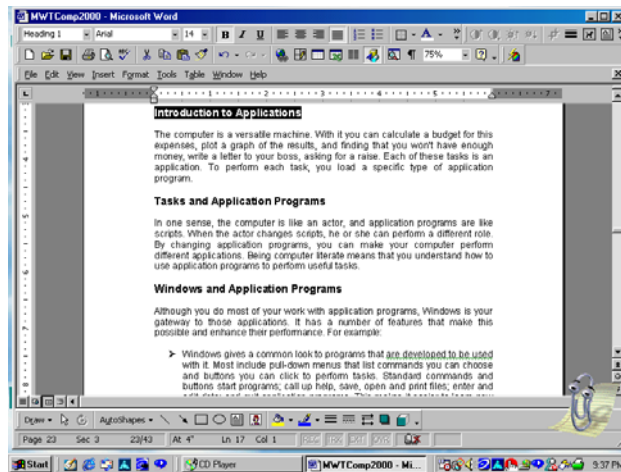


- Position the mouse cursor where you want to start your document and **begin typing**.
- Just **continue typing** and the words will automatically go to the next line. This is called text wrapping.
- If you wish to begin a new paragraph or insert a blank line, press the **Enter Key**.

You may also edit your document without typing the entire document again. You may **Insert Text**, **Delete Text**, change the **Font Size** (make text larger or smaller), or re-position text anywhere on the page, and much more.

- Position the cursor where you want to edit or make a change.
- Just begin typing to insert text.
- Backspace to delete text.
- To change the font size, first **highlight** the text (hold down the shift key and press the right arrow until all text to be changed is highlighted, or click at the beginning of the text and move the mouse across the text until it is all highlighted). This procedure is called **selecting text**.
 - Go to the **Menu Bar** and click on the **down arrow** of the **font size box**.

- Click on the size you desire and the size of all the highlighted text will change.



Spelling/Grammar

Once you have completed your document, you want to assure that the spelling is correct. It is very easy to press the wrong key and miss it.

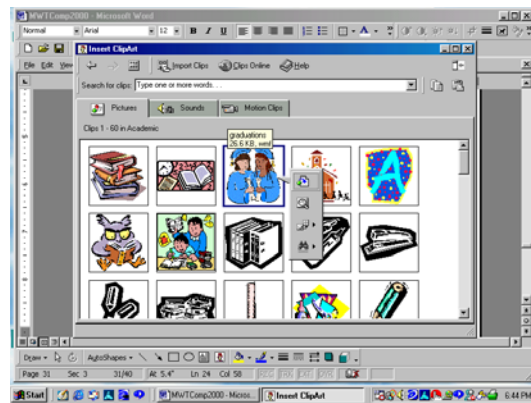
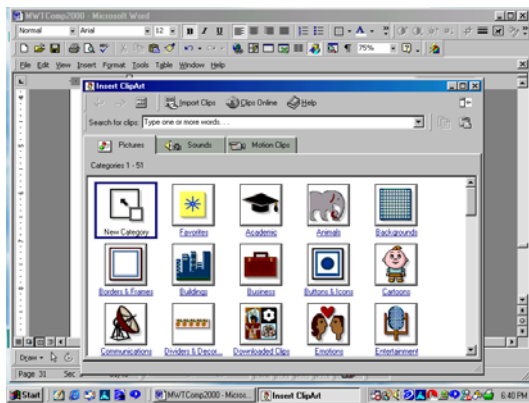
- Position your cursor at the beginning of the document, if you wish to check the entire document.
- Click the **Spelling/Grammar** button (**ABC**) on the Menu Bar.
- The **Spell Checker** will now automatically check each sentence in the document for misspelled words. It also does a grammar check.
- You are given the option to **Change** the spelling (put in another word), or **Ignore** it (do not change anything). If you select change, the word is automatically changed to the suggested word in the window. If there is no suggestion, you may click in the document and make the change yourself.
- To return to **Spell Check** after working in the document, you click **resume**. The **Grammar Checker** allows you the same options.

Importing Graphics

Position your cursor at the **insertion point** in your document.

- On the Menu Bar, click on **Insert**, then **Picture**, and finally **ClipArt**. The Clip Gallery will appear.

- Click on the graphic category, then the specific graphic you want to insert into the document and click on the insertion button. The graphic will appear in the document.

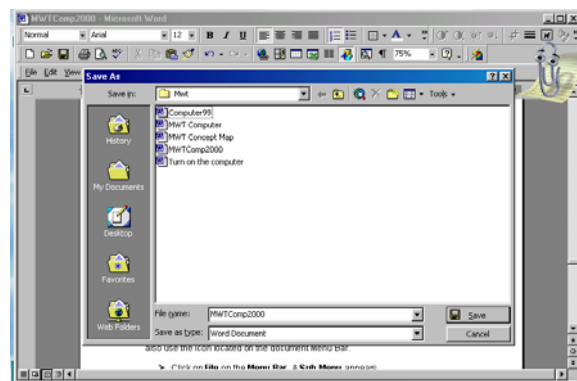


- You must now properly size and position your graphic in the specific location you wish it to appear in your document.

Saving a Document

When you save a document for the first time, use the **Save As** command. This allows you to give the document a **specific name**.

- Click on **File** in the **Menu Bar**. A **Sub-Menu** appears.
- Click on **Save As**. A smaller window will open.
- Type the name you wish to give your document in the **File [Name]** space, located at the bottom of the small window. The smaller window will close and the **Document Name** you typed will appear on the **Menu Bar** to the immediate left of **Microsoft Word**.



**** It is important to save your files frequently, while you are working, to assure that you do not lose any changes made.**

Each time you save your document again, you may use the **Save** command; you do not have to use **Save As** unless you wish to give the document a different name or designation. (You might want two versions of the same document.) The **Save** command is on the same Sub-Menu as the **Save As** command. You may also use the Icon located on the document Menu Bar.

- Click on **File** on the **Menu Bar**. A **Sub-Menu** appears.
- Click on **Save**. The document will be saved with the same name.
- You may also click on the **Save Icon** on the **Menu Bar** at the top of the document (*the graphic of a small floppy disk*). The document will be saved with the same name.

Printing a Document

When your document has been typed and formatted to your pleasure, you are ready to print it. Assure that the printer is attached to the computer, is turned on, and the ready light is on or blinking (this will vary with the printer).

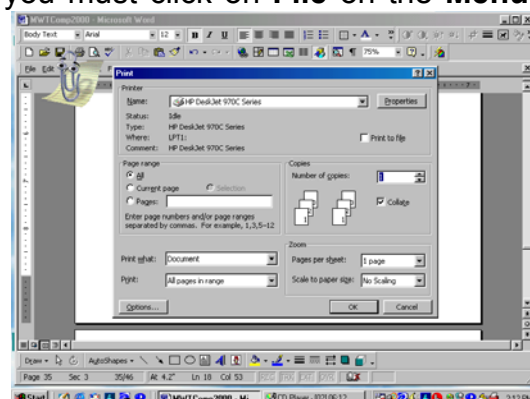
If the current settings in the printer dialog box are correct, you may print the document by clicking the **Print Icon** on the **Menu Bar** (graphic of a printer).

If you are unsure about the appearance of your document, you preview it before you print it.

- Click on **File**; a **Sub-Menu** will appear.
- Click on **Print Preview**.
 - A smaller version of your **entire page** will appear.
 - If your document contains **several pages**, it is possible to display up to eight at one time, however, you will not be able to read them, you may simply check the **layout** of your document.
- You may also access **Print Preview** by clicking on the **Icon** on the **Menu Bar** (a page with a magnifying glass on it).
- Make corrections to your document as many times as you wish (*save it each time*), then proceed to printing.

If you wish to change any printer settings, you must click on **File** on the **Menu Bar**. When the **Sub-Menu** appears, click on **Print**. A **print dialog box** will appear. Click on **Properties** and make any changes you wish, such as:

- **Paper Size** (letter, legal, etc.)
- **Paper tray** to use (manual, first available, etc.)



- **Paper type** (plain, glossy, heavyweight, etc.)
- **Print quality** (draft, normal, best)
- **Color** (color, black and white, grayscale), if you are using a color printer.

*** The above designations will vary with the printer.*

- You may also specify what you want to print.
 - You may print only one page, or several pages of a multiple page document.
 - Designate which pages you want to print in the print dialog box. There are several options:
 - **Current** – the page in which you are now working.
 - **Pages** – designate which pages (1,3,5 or 2-8, etc.).
 - **All** – prints all pages in your document.
 - You may print just a paragraph. (You must first **highlight** the paragraph.)

When all options have been selected, click **OK** and the document will print.

Exiting MS Word

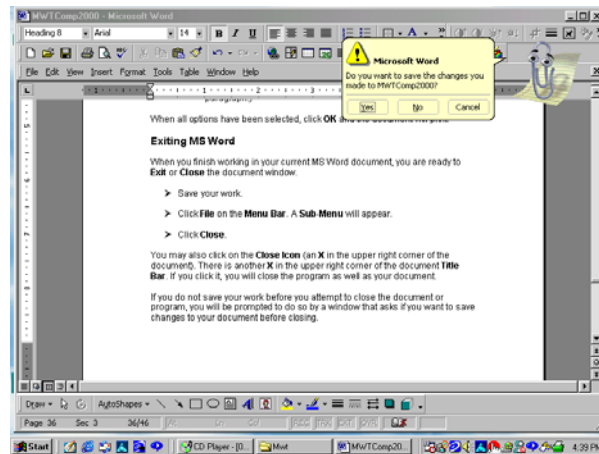
When you finish working in your current MS Word document, you are ready to **Exit** or **Close** the document window.

- Save your work.
- Click **File** on the **Menu Bar**. A **Sub-Menu** will appear.
- Click **Close**.

You may also click on the **Close Icon** (an **X** in the upper right corner of the document). There is another **X** in the upper right corner of the document **Title Bar**. If you click it, you will close the program as well as your document.

If you do not save your work before you attempt to close the document or program, you will be prompted to do so by a window that asks if you want to save

changes to your document before closing.



When you have completed work in all documents, you are ready to **Exit** or **Close** the program.

- Click on **File** and a **Sub-Menu** will appear.
- Click **Exit** and the MS Word program will close.

You may also click the **X** in the upper right corner of the document **Title Bar** and the program will close. If you have not saved your work, you will be prompted to do so.

COMPUTER BASICS

Day 4

Internet Basics

The Internet

The World Wide Web

Internet Service Providers/Online Services

What is an Internet Service Provider (ISP)?

What is an Online Provider?

Examples

MSN

AOL

Web Browsers

What is a Web Browser?

Examples

Internet Explorer

Netscape Navigator

Mosaic

Search Engines

What is a Search Engine?

Examples

Alta Vista

E-mail

What is E-mail

Using E-mail

Web Sites and URLs

The Web Site

The Universe Resource Locator (URL)

The Home Page

Web Sites to Visit

Right to Know Network - <http://www.rtk.net>

Deep South Center for Environmental Justice

Xavier University of Louisiana - (<http://www.xula.edu/dscej>)

Environmental Resource Center

Clark Atlanta University (<http://www.ejrc.cau.edu>)

COMPUTER BASICS

Internet Basics

Objective

The trainee will be able to:

- Define and distinguish between the Internet and the World Wide Web
- Define and distinguish between an Internet Service Provider and an Online Service
- Give an example of an Online Service
- Define and distinguish between a Web Browser and a Search Engine and give an example of each
- Define E-mail and set up a personal E-mail account
- Define and distinguish between the Web Site, the URL and the Home Page
- Write a reasonable URL, given the institution or organization for which it is being created, and the association of that institution or organization
- Go online, properly using any of the above necessary to obtain information

INTERNET BASICS

The Internet

The history of the **Internet** and the **Web** takes us back only about 31 years. We often use the terms **Internet** and **Web** interchangeably. They are not the same but they do work together.

- It was through a US Department of Defense-funded project that the **Internet** was created, in 1969. The project provided communication connections among universities conducting military research.
- The **Internet** can be defined as, “a vast global network linking thousands of smaller computer networks.”
- The computers are linked through a system of telephone lines and other transmission methods, and communicate via a common universal **electronic language**, allowing the exchange of information worldwide.

The World Wide Web

The **Web** is a collection of electronic documents stored on computers worldwide and represents only a portion of the information available through the **Internet**.

- The **Web** did not even exist until the early 1990s after **Hypertext markup Language (HTML)** was invented.
- **Tim Berners-Lee** at CERN, a Swiss research laboratory in Geneva, Switzerland created **HTML**.
- He developed it as a means of linking information among Internet sites so that physicists could share research data.
- **Web** documents contain hyperlinks or connections to other documents.
- A **hyperlink** is a **graphic** or **word** or **group of words**, that is highlighted or underlined when clicked with the mouse, and takes you to another **Web** page.
- **Hyperlinks** make it easy for **Web** users to move from one document or site to another by clicking the mouse.
- It is noted in a PC Novice article that these links and this easy connectivity are what gave the **Web** its name.

Internet Service Providers/Online Services

Internet Service Providers (ISPs) are organizations that have large Internet-connected computers and for a fee, allow users to dial into their computers to connect to the **Internet**. ISPs provide you access to the Internet, but you are responsible for finding information you want. This navigating can be very frustrating to someone unfamiliar with using the **Internet**.

Commercial **Online Services**, for a fee, will also provide access to the **Internet**, but to members only (*you must subscribe to their specific service*).

- You dial into their computers to gain access to the **Internet**, just as you would when using an **ISP**, however, they are described as, “*more of an online spoon-feeding for novices.*”
- You will find that **Online Services** are highly organized, making life on the Internet a lot easier for their users.
- **Online Services** have such features as special areas on the **Web** reserved for members, **newsgroups**, **chat rooms**, built-in **E-mail** programs, and sometimes, a built-in **Web Browser**.
- The major problem experienced with **Online Services** is a busy signal when trying to dial in to access the **Internet**.

To access the **Internet** via either provider, you will need a **Modem**. A **Modem** is a device either internal or externally connected to your computer, which allows you to access the **Internet** using **telephone lines**. It acts as a translator for information being sent (**modulator**) and received (**demodulator**), hence the name **Modem**.

Examples of Online Services

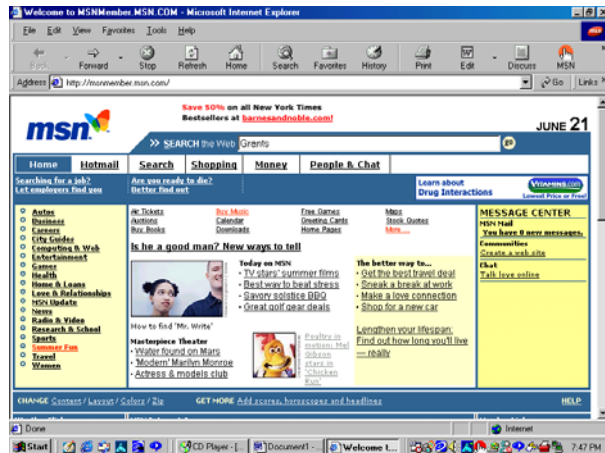
America Online (AOL) is one of the major **Online Services** available. The user community, or membership, is very large.

- The software is distributed freely and is easily installed.
- For a monthly fee of about \$20.00, you may have seven users and unlimited service.



The **Microsoft Network (MSN)** is another major **Online Service** and functions about the same as other **Online Services**.

- A phone call will get the software to you free of charge, and installation is easy.
- The monthly fee for unlimited use is also about \$20.00.
- One major difference is the number of individual users you may have on one account.



Web Browsers

A **Web Browser** is defined as software that lets users gain access to and use the **Web**. Developers at Berners-Lee and CERN wrote a program that was able to run on many types of computer systems, making it possible for scientists everywhere to access research documents via the **Internet**.

- This program became known as a **Web Browser**.
- **Web Browsers** were given a major step forward when **Mosaic** was created. It was developed by the University of Illinois' **National Center for Supercomputing Applications (NCSA)**, and distributed freely via the **Internet**.
- A few of the team members left the company and created their own company and developed their own **Web Browser**, **Netscape Navigator**.
- Microsoft followed shortly thereafter with the development of **Microsoft Internet Explorer**.

Search Engines

A **Search Engine** is software or a computer program that hunts for information in a pool of data called a **database**. Usually, the database search begins with the user typing in a word (**keyword**). Your search may be very broad or you may narrow it significantly, depending upon the word or words you enter.

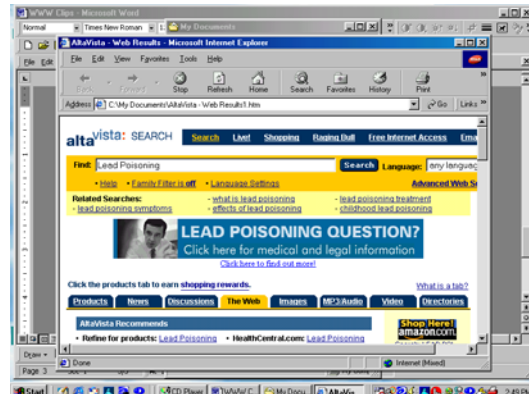
After you type in your **word** and tell the **Search Engine** to search, it will respond with a list of matching terms, documents or sites. They are generally listed in their order of relevance. In some cases, there may be little relevance because the **Search Engine** cannot distinguish between meanings. Each document retrieved is referred to as a “**hit**.”

Different **Search Engines** have different size databases, which are organized differently as well. The databases are like **libraries**. Some are **small**; others are very **large**.

Alta Vista is an example of a good **Search Engine**. It has a very extensive database, estimated to contain **60 gigabytes of data**, and it uses **keywords**. You type in a word and click search. You will retrieve documents, usually listed in order of relevance in sets of ten, and may be as extensive as hundreds or thousands of hits.

If you get too many hits the first time, you can **refine** your search by deleting certain terms you want to leave out of the next search. Or, you may add specific words to refine your search.

The word lead might be used as an example. Suppose you need information on **lead poisoning**, so you enter the word **lead**. You will retrieve some entries on lead poisoning, but you have to wade through many that are not really related to **lead poisoning**. You may retrieve documents, songs, and places that list lead in the title, however, some will probably reference **lead** as in *(to lead others who follow)*. On the other hand, if you enter the words **lead poisoning**, you will only retrieve documents about **lead poisoning**. Very broad searches are good however, when you are not sure of what you want.



E-Mail

E-mail is a system for sending and receiving **messages** through the computer. You can send typed or text messages, graphics or photos, sound messages or voice mail. You have to address your mail so that the **mail service provider** knows where to deliver the message.

Sometimes the system is slow. Sometimes mail gets lost. If the address is incorrect, it can end up in the wrong person's mailbox. If no one else has an **E-mail** address that matches the one you put on your message, it will be returned to you. Your mail may be very fast, however, and arrive in a matter of seconds.

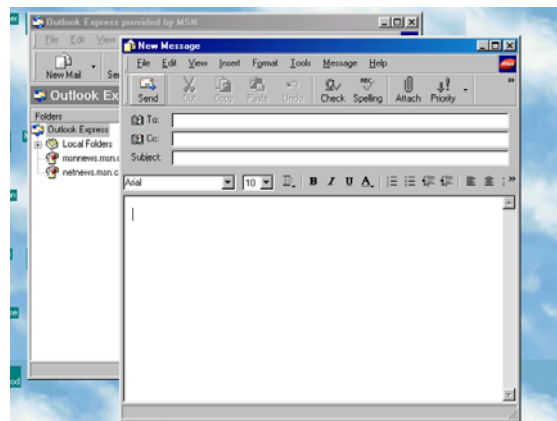
Using E-mail

E-mail setups usually show at least three tabs or boxes:

- **New mail** – incoming mail that you have not read
- **Old mail** – mail that you have read but have not deleted
- **Sent mail** –mail messages you have sent to others

When you are ready to send an **e-mail** message, click on mail or write, or whatever your set-up requires to access the message area (this will vary with different **Online Services** or **ISPs**).

- In the **To** box - type the E-mail address of the person to whom you are sending the message.
- In the **Cc** box – type in the E-mail address of anyone to whom you want to send a copy of the same message.
- In the **Subject** box – type in the subject of your message (you don't have to have a subject).



- In the **blank space** – type your message.

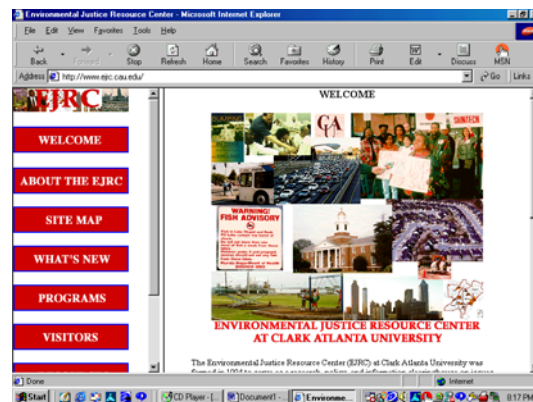
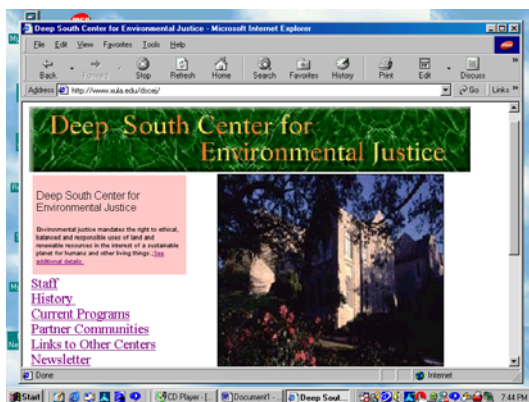
After you've addressed your mail and typed your message, just click **send** and the message will be sent.

Web Sites and URLs

A very interesting component of the new found technology is the capability of various organizations and institutions to have information about them listed on the Internet. Three organizations that have played a major role in the development of this program can be found on the Internet. These organizations are the **National Institute of Environmental Health Sciences**, the **Deep South Center for Environmental Justice** at **Xavier University of Louisiana**, and the **Environmental Resource Center** at **Clark Atlanta University**.

- The **Web Site** is where the institution or organization resides on the **Internet**.

- The **URL** is the **Web Address**. It lists the specific **Web Site** that is being accessed and the computer on which it can be found.
 - Every **Web Address** begins with **http**. This tells the browser that the document located at this address is **HTTP** compatible. **HTTP** is the acronym for **HyperText Transfer Protocol**, the set of standards that lets Web users exchange information found in **Web** pages.
 - The **http** is followed by a colon, and two forward slash lines; so you will see [**http://**].
 - The next letters in the address are **www**, for **World Wide Web**. The **www** is followed by a period.
 - The next letters identify the document or organization and the location of the computer that houses the information. **Each section of the address is separated by a period.**
- When you type in the **Universe Resource Locator (URL)**, the first page you will see is called the **Home Page**.
- The **Home Page** is the main page of a **Web Site** and it contains **hyperlinks** to other pages in that site and related sites.



COMPUTER BASICS GLOSSARY

Application (app) - An executable program capable of performing a specialized function other than system maintenance.

Arrow keys - a group of four keys used to move the cursor on the screen up, down, left or right.

ASCII - American Standard for Information Interchange - a special code that represents characters (letters, numbers, and symbols) and is recognized by computers.

Backspace key - a key, usually located in the upper right corner of the main sector of the keyboard, that causes the cursor to move back one position. In word processing, it erases the character immediately preceding the cursor.

Bit - short for binary digit, the smallest unit of computer storage; a single digit in a binary number, either 1 or 0, often called "on" or "off."

Boot - to turn on the computer (also known as cold boot or cold start). It is the first step to using it, as the computer must load certain information in its memory before running other programs. The word comes from "bootstrap," the straps that help people pull on their boots.

Byte - equal to either seven or eight bits; sufficient for storing a single character such as the letter A or the number 2.

Cable - a bundle of wires in a protective rubber or plastic covering, with connectors on both ends used to link various parts of the computer system to the computer.

Cathode-ray tube (CRT) - the display screen that is used in most televisions and standard computer monitors. It functions by having an electron beam move across the back of the screen, lighting up phosphor dots on the inside of the glass tube, which causes an image to be displayed on the outside of the screen.

CD-ROM (compact disc-read-only memory) - a storage medium using CDs to hold computer memory, roughly equivalent to 700 diskettes, can't be erased and reused.

CD-ROM drive - an internal or external disk storage device that reads CD-ROMs.

Cell - an intersection of a row and a column in a spreadsheet, such as cell B1.

Central Processing Unit - the computer's control unit or microprocessor; its "brain"; a silicon chip that interprets and carries out instructions

Click - to use a mouse by depressing and releasing its button one time without moving the mouse.

Clipboard - a memory feature where the last information that was copied or cut (but not deleted) is stored. The clipboard can hold only one item at a time.

Cluster - a group of sectors on the disk that is treated as one entity by the computer operating system.

Cold boot - turning the computer on after it has been completely shut down.

Control key - key that changes the meaning or function of other keys when used in combination with those keys.

Crash - the sudden, unexpected termination of a program caused by a problem with either the hardware or software program being used.

CRT - See cathode ray tube.

Cursor - the blinking symbol (i.e., line or box) on the screen

Database - A collection of related information that is kept in an easily accessible format, i.e., a table or form or report.

Defragmentation - To reorganize a hard disk or floppy diskette so that individual applications or files are not scattered or fragmented.

Delete - a command used to remove data from the storage medium (hard disk or floppy diskette).

Desktop - In a graphical user interface (GUI), it is a system used for organizing icons on the computer

screen that employs the same principles used for organizing the top of a desk.

- May refer to the Windows95/98 Desktop, the first screen you see when Windows is opened, and contains such items as the "My Computer icon", the "Recycle Bin icon" and the "Start button".

- May refer to a computer that fits completely on or under a desk or table as opposed to a mainframe that may require floor space, or a laptop that may fit in a briefcase.

Device - External hardware apparatus that may attach to a computer, such as a printer or a modem.

Digit - A character in a numeric system

Digital - An electronic device that uses a limited, predetermined numbering system to measure or represent the flow of data; able to store images as bits in a

Digitize - The process of converting linear pictorial images into digital data for storage.

Directory - A section of the hard disk, or a floppy disk that contains an organized group of files and/or sub-directories.

Drive - A physical internal device that stores information in files.

Driver - A program that allows a peripheral hardware device to communicate with the computer.

Edit - A mode in which files can be changed.

Enter key - The key, that when pressed, tells the computer to execute a command that may have been typed or highlighted.

Escape key - A key marked ESC. Its function varies. When pressed, it may cancel an action, return you to a previous program or menu or completely close a program.

Executable file - A file that can be run, as opposed to data files which are simple collections of data used by executable files.

File - A named collection of data in the electronic form or any form of data that is stored on a computer disk.

Floppy disk - A removable storage device, 3.5" or 5.25".

Floppy disk format - The initial preparation of a diskette for data storage.

Folder - An organized catalog of files called directories on the PC.

Font - The design for a set of characters.

Function keys - A group of keys located on the top row of the keyboard that allows different functions to be performed depending on program used.

Gigabyte - Equal to approximately 1 billion bytes, or 1000 megabytes (MB), used when measuring the

capacity of hard drives or storage devices.

Gopher - A search tool that helps Internet users locate information online through menus that are itemized according to the collections of information and databases stored.

Graphical user interface (GUI-gooney) - Indicates that a system uses graphical symbols, called icons, and menus to carry out commands, open files, and select options. It can be operated with a mouse or a keyboard and is designed to be easier to use than a character-based interface, such as DOS, in which commands had to be typed at a prompt. Windows and the Macintosh operating systems are GUIs.

Hard copy - A document actually printed out, as opposed to an electronic copy on the computer, called the soft copy.

Hard disk drive - An internal storage device on which you can save your work and install programs.

Hardware - The physical components of a computer, such as the monitor and keyboard.

Home - Refers to the beginning of the document or page or the current screen.

Home page - The main page of a Web site to which other pages are linked.

Hyper-link - An icon, graphic, or word in a file that when clicked with

the mouse or is otherwise selected, will automatically open another file.

Hypertext - Linked text in a file that when clicked by the mouse or is otherwise selected will cause the automatic display of a related file.

Icon - A small graphical image used to represent a function or a program.

Input - Any information entered in the computer.

Insert key - The key that can be used to allow information to be inserted or overwritten.

Internet - A global network linking millions of computers for communications purposes.

Internet address - The location of a network computer or account such as the unique Internet Protocol (IP) address by which each computer on the Internet is known to the rest of the system.

Internet Service Provider - Either a local organization based in your town, or a national organization that lets users dial into its computers to connect to its Internet link for a fee, and may provide electronic mail (E-mail) and World Wide Web (WWW) browsing. Commercial online service providers, such as AOL or Compu-Serve provide additional features such as chat rooms and searchable databases, but are usually more expensive.

Keyboard - An input device used to enter information into the computer.

Kilobyte (K) -1024 bytes.

Local-area Network (LAN) - A group of computers, usually in one building or office, that are physically connected in a manner that allows them to communicate and interact with each other. They are connected to a server computer that holds the data used by the computers on the network.

Mainframe - A large central computer with lots of memory, storage space, and fast microprocessors that handle all the processing and storage for a group of terminals (referred to as dumb terminals).

Megabyte (Mb) - 1024 kilobytes.

Memory - The place a computer stores information that it uses to run programs.

Menu - A list of command choices offered to the user.

Modem - A device that enables communication between computers through telephone lines.

Monitor - A display device that outputs data/programs visually.

Motherboard - A printed circuit board that is the foundation of a computer and contains the CPU, RAM chips and expansion slots; referred to as the place where all the computer's components meet.

Mouse - An inputting and pointing device used to point and click objects.

Network - Two or more computers linked together in order to share data, files, software and peripheral devices.

Numlock key - The numeric lock key, that when engaged, allows the keys 0-9 and other function keys on the numeric keypad to be used. When it is not engaged, the cursor functions programmed on the keys may be used.

Operating system (OS) - Software that controls the computer and its peripherals, such as DOS, OS/2 or Windows.

Output - Information received from a computer.

Path - Shows the way (path) back to the root directory.

PC - Personal computer.

Peripherals - Devices that are outside a computer such as a keyboard, monitor and mouse.

Printer - an output device that produces a paper or hard copy of the file.

Process - To manipulate, alter or display information contained in a computer. Any action a computer takes is processing.

Prompt - Displays the drive, directory, and path currently in use.

RAM - Random Access Memory, where executed programs are stored. This memory is erased when

the computer is warmed or cold booted.

Re-boot - To restart the computer by pressing the CTRL-ALT-DEL keys together.

Record - May refer to a collection of information in a database.

- May refer to writing of data to a drive.

ROM (read-only memory) - A type of built-in memory that can only be read and not altered in any way.

Root - Refers to the main directory; the highest level in a hierarchy.

Save - Writing data to a permanent storage area on a hard drive or floppy diskette.

Save as - Writing data under a specific file name; may be a new file name or just different from the original file name.

Scan - May refer to digitizing an image through the use a special viewing device.

- May refer to looking at a file piece-by-piece or line-by-line.

Screen saver - A program that is activated when the computer has been idle for a pre-set period of time.

Server - The control computer on a local area network (LAN).

Search engine - A special program on the World Wide Web that allows users to quickly sift through millions of documents on the Internet, such as AltaVista, Infoseek, Yahoo and Excite.

Software - A program that contains a set of instructions that tells a computer what to do.

Sort - A command that tells a program to organize data in a certain manner, such as alphabetically, numerically, by date or by keywords.

Spreadsheet - A computer program worksheet containing columns and rows; used to display and manipulate numerical data.

Storage - The holding of information in for use at a later time, either internally or on the hard drive, floppy diskettes, zip disks or tape drives.

Sub-directory - A directory off the root directory or another directory.

System - The integration of hardware and software to create a machine, such as a computer, that

can perform work; may refer to a single computer or multiple computers.

Table - An arrangement of information in rows and columns.

Tape Drive - A device to reading from and recording to magnetic tape.

Task bar - A bar of information at the bottom of the screen that displays icons of open applications such as a virus program (VirusScan), an Internet Service Provider (AOL), the printer or may display the date and time.

URL (universal resource locator) - A standard naming or "addressing,"

system for documents and media accessible over the Internet.

Video - Relating to the visual display of computer data on the monitor.

Virtual memory - A type of hard drive space that mimics actual memory (RAM), when actual memory space is limited.

Virus - A program designed to destroy data or halt operation by copying itself into files and executing when files are loaded. This problem occurs when diskettes are infected or from online transmission.

Volatile memory - Memory, whose contents are erased, when the system's power is turned off (or interrupted). RAM is volatile; ROM is not.

Warm boot - Resetting a computer that is already turned on by pressing CTRL-ALT-DEL keys simultaneously or pressing the reset button on some computers or by going to start, shut down, restart menus when using Windows 95/98.

Web browser - Software program that gives access to and navigation of the World Wide Web (WWW), such as Netscape Navigator or Microsoft Explorer.

Word processing - Creating, storing and printing documents using a computer program known as a word processor.

World Wide Web - A graphical interface for the Internet that is composed of Internet servers that

provide access to documents which in turn provide hyperlinks to other documents, multimedia files, and sites.

Zip - Slang for a compressed file.

Zip disk - A special disk that can has a large memory capacity equal to 70 3.5" floppy diskettes, and is accessible only via a special peripheral device or built-in device known as a zip drive.

Activity Page

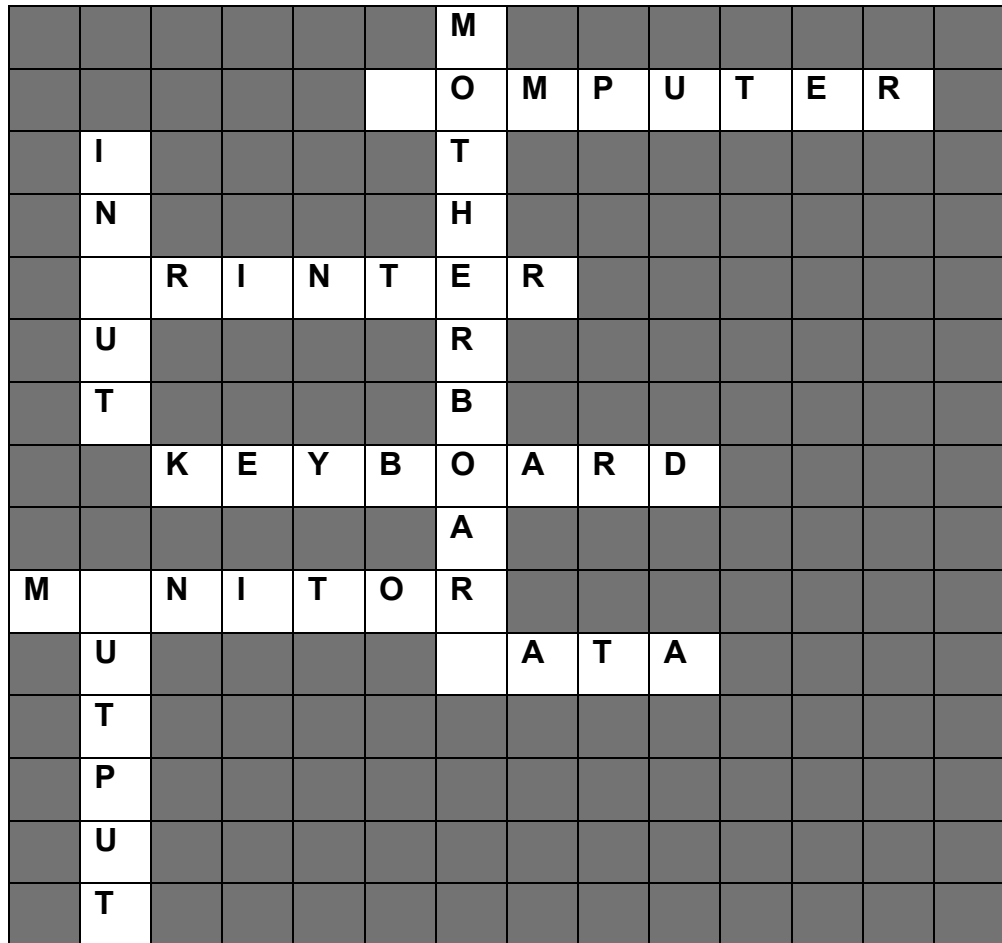
Computer Terminology

Objective: The trainee will be able to test his/her memory of computer-related terms.

Fill in the blanks and complete the crossword puzzle of computer terms.

1. What device is named after a small gray rodent? _____
2. This device uses letters, numbers and function keys to input data.

3. The _____ temporarily displays a visual image.
4. The _____ is the brain of the computer.
5. All computers generally perform four basic operations, _____,
_____, _____, and _____.



Activity Page

Word Processing

Objective: The trainee will perform three exercises in order to develop capability in the basic use of the computer and word processing.

- Develop a resume
- Develop a biography
- Develop an attractive cover page

Position yourself comfortably at the computer, locate the **power** or **on/off button** and turn it on. The computer will perform its startup activities. When the Windows screen is settled and the whirring sound is gone, you are ready to start.

Word processing is the major function the average computer user performs. You must use the **keyboard** to type your documents or input data, so this is a good place to start.

The **keyboard** is divided into two parts. The right side is a numerical keypad. The left section is very similar to the typewriter keyboard.

If you already know how to type, you are ahead of the game. If not, the following information will help prepare you to begin.

Position your hands as follows:

Left Hand - Place the little finger on the **A**, the ring finger on the **S**, the middle finger on the **D**, and the index finger on the **F**.

- The little finger is responsible for hitting the **A**, **Q**, **Z**, **Caps Lock**, **Tab**, and **Shift** keys.
- The ring finger is responsible for hitting the **S**, **W**, and **X** keys.
- The middle finger is for the **D**, **E**, and **C** keys.
- The index finger is for the **F**, **R**, **T**, **G**, **B**, and **V** keys.
- The thumb is for the space bar at the bottom of the keyboard.

Right Hand - Place the little finger on the **,**, the ring finger on the **L**, the middle finger on the **K**, and the index finger on the **J**.

- The little finger is for the **/**, **;** and **P** keys.
- The ring finger is for the **L**, **O**, and the **period**.

- The middle finger is for the **K, I**, and the **comma**.
- The index finger is for the **J, U, H, M, N**, and **Y** keys.

You are now ready to begin typing. The following is a typing exercise.

- Access MS Word. The program will open to a blank page.
- Position your cursor on the page where you wish to begin typing.
- Type the following sentence twenty (20) times.

This is the sentence. **[Use the keyboard and select a wizard or a template as a guide to help you.]**

Activity Page

Develop a Résumé

Access MS Word. A sample document can be found in the MS Word Templates.

- When the program opens to a blank page, click on File. A Sub-Menu will appear.
- Click on New. A window containing tabs will appear.
- Click on Documents Several Templates will appear.
 - You may select Resume Wizard, which will guide you through the entire process.
 - or
 - You may select Contemporary Resume, Elegant Resume or Professional Resume. Fill in the form with your own information.

You may be instructed to type a resume using a hard copy (on paper) sample.

- If so, position your cursor on the blank page where you wish to begin typing.
- Type your information. Save your work.
 - When you save your work for the first time, give the document a descriptive name.
 - You will be instructed to save your work often.
- Edit your document.
 - Increase the font where instructed. Save your work.
 - Make the type bold where instructed. Save your work.
 - Indent where instructed. Save your work.
 - Underline, etc. where instructed. Save your work.
- Check your spelling. Always run the spell checker.
 - Make changes as required. Save your work.
- You are now ready to print a hard copy. This is called data output.

Activity Page
Develop an Attractive Cover Page

Activity Page
Develop a Biography

Activity Page

E-mail

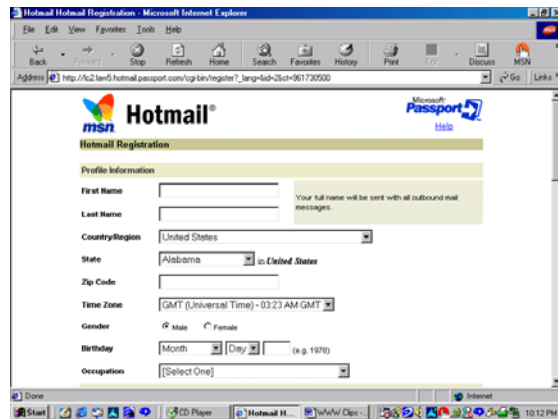
Objective: The trainee will have an opportunity to perform the following tasks.

- Create an e-mail account
- Send and receive e-mail

There is no requirement that you have your own E-mail address in order to send e-mail, however, the recipient will not know where to send a reply to you. When your e-mail is received, your party may simply reply to the address on the message, however, if it is not your own address, the reply will go to the person whose E-mail address/account you used.

In order to receive personal messages that you alone can open and read, you need your own e-mail address. Then, you are required to type in a user name and a password in order to access the mailbox.

Anyone who has access to the Internet can have an e-mail account. E-mail accounts are free. The most common free e-mail available is MSN's Hotmail. Graphics illustrating the Hotmail Web Site and account form are shown below.



Follow the directions of your instructor to create your own e-mail account.

Activity Page

Web Sites on the Internet

- Objective: The trainee will perform the following tasks successfully.
- Define URL
 - Write a reasonable URL for the Web Sites of listed institutions/organizations
 - Explain how the URL describes the institution/organization
 - Access that institution's/organization's Web Site

1. Define URL _____

For each of the following institutions, type a URL and explain how you think the URL describes that institution.

2. The National Institute of Environmental Health Sciences

a) URL - _____

b) How does the URL describe this institution?

3. The Deep South Center for Environmental Justice at Xavier University of Louisiana

a) URL - _____

b) How does the URL describe this institution?

4. The Environmental Justice Resource Center at Clark Atlanta University

a) URL - _____

b) How does the URL describe this institution?

5. Using your suggested URL, try to access the Web site of one of the institutions.

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