THE NEW YORK SOCIETY LIBRARY
PRESENTS:

Introduction to Computers
by Ingrid Richter

Wednesday, April 26, 2000
Thursday, April 27, 2000
Saturday, April 29, 2000

1:30 p.m. in Whitridge Room

INDEX

BACKGROUND:
IDENTIFYING YOUR COMPUTER
There are two basic types of computers today: Macs and PCs

Partial MacIntosh Program

1. Mac (short for MacIntosh - the evolved version of the Apple Computer) was the first computer with a graphics user interface (or "GUI", also known as "windows"; programs are viewed graphically in individual windows_. Macintosh donated a large amount of computers to schools and universities and is the first computer most children use. Macs are consistent (their programs work on all versions), easy to set up, have excellent graphics capabilities,   read and recognize PC disks (the reverse, unfortunately, doesn't hold true) and are generally more expensive than a PC for all these reasons.   Macs operate on the principle that "the computer should do all the work" and were the first computers to implement "Plug & Play Devices", or the ability for the computer to recognize and install the proper hardware.   There is no such thing as a Mac clone (or another brand using the MacIntosh operating system) and their operating system information is highly protected.   Common Macs today include: iMac and Power Macs.


PC Interface (Windows 98)

2. PC (short for Personal Computer) used to be called IBM and IBM Clones. IBM released their technical specifications for other companies to copy (unlike MacIntosh), which led to a large amount of cheaper IBM Clone computers on the market. Consequently, IBM is no longer the major manufacturer of PCs and new terminology had to be used.   "PC" is, of course, a misnomer as Macs are also personal computers (but no better terminology has been applied). PCs include such major brands as: Compaq, Dell, Gateway, Hewlett-Packard, IBM, Toshiba and NEC. If you're not sure what your computer is, it's probably a PC. PCs are easily expandable, easier to troubleshoot and have arguably more programs (software) written for them. PCs encourage you to add and replace parts inside them (also known as "upgrading"), although it's not essential or required. They're not as easy to set up and use as a Mac, but can be configured to your precise specifications. (Want two hard drives? Use a PC).   PCs give you access to vital system components and assume that you're intelligent enough not to throw them away (it's nice to know they think highly of the user).

**The rest of this document will focus on PC's.**

BACKGROUND:
COMPUTER SIZES
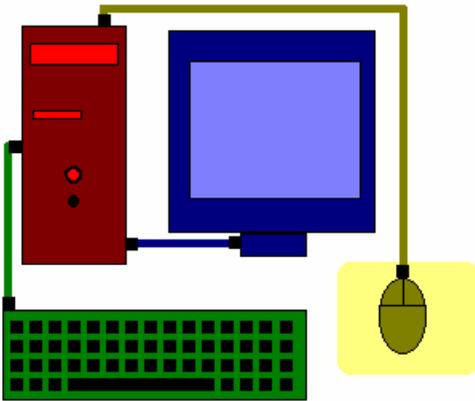
1. Desktop Computers

Bulky, unwieldy and more powerful than a laptop. These reside on a desk and have a separate monitor, keyboard and mouse attached.

Computer components at left:
computer (in red), monitor (in blue), keyboard (in green), & mouse (in yellow)
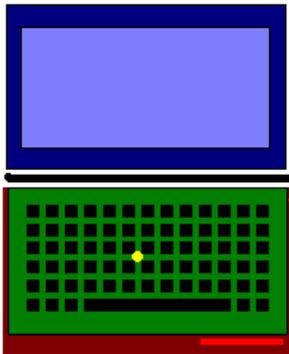
2. Laptop Computers

Light, portable and usually not as powerful as a desktop computer. The screen, keyboard and mouse is built directly into the computer as well as the LCD monitor (liquid crystal display).

Note: The mouse (in yellow) is built into keyboard for space considerations.
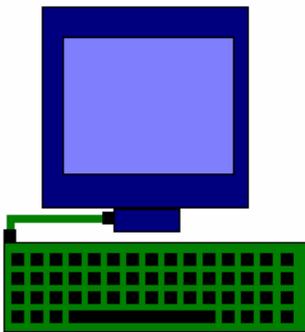
3. Dumb Terminals

A dumb terminal has no computer or mouse - only a monitor and keyboard. The back of the monitor is connected directly to a master computer out of sight of the user.   This is what the New York Society Library uses for the online catalog.

COMPUTER COMPONENTS

1. Hardware (a.k.a. The Machine):
Anything you can physically touch (includes: the computer, monitor, keyboard, mouse, modem, printer, etc.)

2. Software (a.k.a. The Programs):
Any program installed on your computer (includes: Windows Explorer, Calculator, Paint, Wordpad, Microsoft Word, Microsoft Excel, etc.)

We will be discussing the Hardware first.

HARDWARE
THE COMPUTER
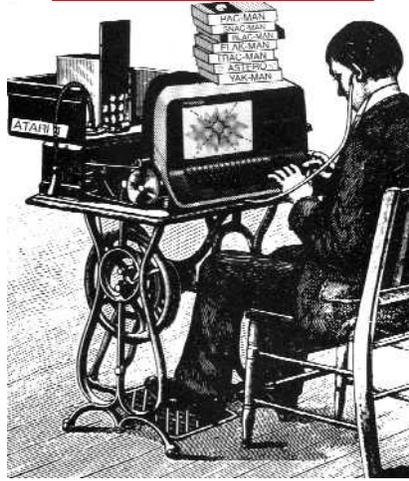
Once defined as "one who computes," this is now the common term associated with the computing device that you connect the monitor, keyboard and mouse to.

The two most important parts of the computer are:

> 1. **The Processor (a.k.a. The CPU, or "Central Processing Unit")**
> This is the brains of your computer. The speed (measured in megahertz, or cycles per second, abbreviated MHz) is determined by the microprocessor chip (Intel Pentium is a common type).

> 2. **The Memory**
> There are two types of computer memory: ROM (read-only memory, static memory used by the system; don't worry about it) and RAM (random access memory, used by you for running programs. This is cleaned out every time you restart your computer)

The computer comes with different drives, as a means of inputting and exporting data to and from your computer.   The common drives are:

- **The Hard Drive** - this is a permanent, internal storage area inside your computer. Information (including the computer operating system) is copied and remains here until you physically remove it. By convention, the computer hard drive is associated with the C: drive (a slot on the computer)
- **The Floppy Drive** - (a.k.a. the floppy disk drive) enables you to copy information to and from your hard drive via an external slot.   Initially, computers had two floppy drives (assigned the letters A: and B:) and no hard drive. The A: drive was used to run the operating system (DOS) and the B: drive for specific programs. Nowadays, computers generally only have one floppy drive (a 3.5" drive assigned as A:) Floppy disks that you insert in this drive used to come in two sizes: 3.5" square and 5.25" square. The 3 1/2" disks - which store up to 1.44 MB of information) are the ones used today.
- **The CD-ROM Drive** - (stands for "Compact Disk - Read Only Media", not "Memory") is a somewhat recent development (in conjucntion with the hard drive), useful for installing large programs on the hard drive, viewing interactive programs and listening to audio CD-ROM's (just plug headphones into the jack near the drive). However, you are unable to save information onto a CD-ROM.

THE COMPUTER
TRANSLATING COMPUTER SPECS
(or, Translating what the computer nerds are talking about)

This month (April 2000), MicroWarehouse is offering the following computer: a HP Brio Minitower, with a 466MHz Celeron processor, 4.36GB hard drive and 32MB RAM for $499.   Great price, but what does this all mean?

First off, HP stands for Hewlett Packard, a major manufacturer of computers. The "Brio" is one of their models, but is useful only if you track internal HP hardware models (I don't). Minitower means that it will stand upright instead of being flat and wide.

The 466MHz is the speed of the computer and stands for 466 Megahertz (a hertz is one cycle per second); 466MHz is a fast speed for a computer.   The New York Society Library computers run anywhere from 133 to 350 MHz, while the fastest computer on the market today runs at 1 GHz, or 1,000 MHz.   Celeron means that it contains an Intel Celeron chip (a variation of Pentium), which is a dependable sign (only recently have companies other than Intel started manufacturing microchips. This is one of the reasons why there is a glut of cheap computers on the market).

The 4.36GB hard drive is the storage capacity of the computer. NYSL computers range from 810 MB to 7.85 GB hard drives.   A brief discourse on size: Computer size is measured entirely in terms of bytes.   Each character that you type on a keyboard is a byte (i.e. the dollar sign $ is one byte). Bytes, however, are so small as to be ridiculous to talk about (you never hear anyone say they have a 4,360,000,000 byte drive)

- **1 KB (one kilobyte)**, or about 1,000 bytes, is the size of about half the text on this page. Since bytes are so small, people generally use kilobytes as the default size reference. This entire document, saved in Microsoft Word format, takes 756 KB of space.

- **1 MB (one megabyte)** is about 1,000 kilobytes (it's actually 1,024 KB, or 2 to the 10th power); as reference, a 3.5" floppy disk stores 1.44 megabytes, or a hefty 720-page book with no fancy formatting.

- **1 GB (one gigabyte)** is about 1,000 megabytes, or 1,000,000 kilobytes.

Onto memory: 32 MB RAM (memory) is pretty poor for a new computer, which means that you'll run into problems when running several applications at once (multi-tasking).   The majority of the NYSL computers have 64 MB RAM; better still is 128 MB RAM currently on the market. Memory can always be upgraded (32MB to 64MB, and 64MB to 128MB) but it's rather expensive.

Unfortunately, the speed (466MHz) of the computer won't help if the computer runs out of memory (i.e. the computer will freeze if too many programs are run simultaneously).   This is why the price for the HP Brio Minitower is (relatively) low.

VITAL HARDWARE:
THE MONITOR

This is the main output device (or how the computer communicates with you).

There are two video parts: the monitor and the display adapter. The monitor is the physical screen that sits on your desk. The display adapter is an expansion card (another piece of hardware) inside your computer that tells the computer information about the monitor.

Monitors come in two basic styles: monochrome and color.   The NYSL online catalog uses a monochrome monitor (green text on a black background, although there are several other variations) while the Children's Room CD-ROM computer (and most PCs) uses a color monitor.

The colors displayed on a color monitor can range anywhere from 16 colors (first computers) to 256 colors (better) to High Color (16-bit, for Windows 95) to True Color (32-bit, for Windows 98), depending on your display adapter.   Screen resolution ranges from 640x480 to 800x600 (most common), to 1024x768 and so on. The resolutions is done in pixels per inch (or tiny individual lights on the monitor). The larger the number, the better the resolution.

Monitors have better resolutions than TV sets, out of necessity; there is too much small text that needs to be clearly on a computer that would be blurred on a TV set. This is also why monitors are (generally) more expensive than televisions.

A Word about Screensavers:
If you are planning on keeping your computer and monitor turned on while you're away from it for long periods of time (i.e. overnight), it's a good idea to have a screensaver program running.   Screensavers are active programs that save wear and tear on your monitor by changing the image on the screen until halted (by hitting any key on the keyboard). They're also fun to watch (see: MOPYfish on the NYSL Kids CD-ROM computer). There are several default screensavers in Windows 95 and 98 (found in: **Start->Settings->Control Panel->Display**).

HARDWARE:
THE KEYBOARD
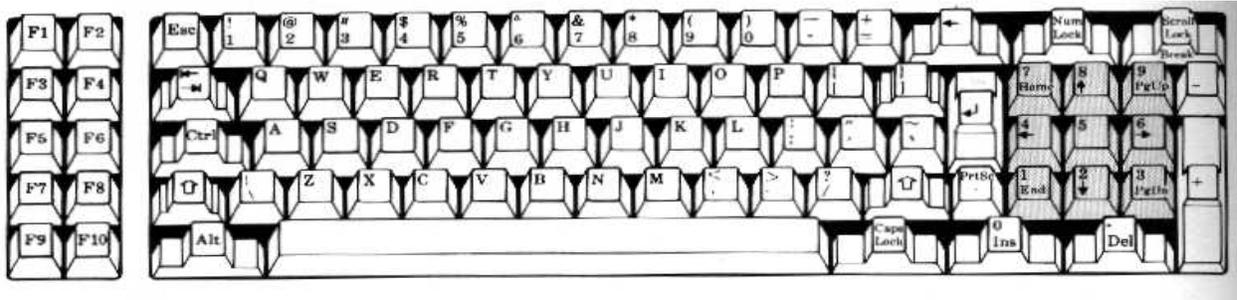
This is the main input device (how you communicate with the computer). There are four main types of keys on the keyboard:

1. **The Typewriter Keys** are in familiar QWERTY style
2. **The Function Keys** range from F1 through F10, and are no longer widely used (originally used to shorten applications)
3. **The Arrow Keys (←↑↓→)** move the onscreen cursor in the arrow direction (these are especially useful for the NYSL online catalog).
4. **The Numeric Keypad** is used for fast keying of numbers and can also be used as arrow keys (you'll need to toggle Num Lock).

Additionally, the keyboard contains some unique computer keys (used to make things easier for you, not harder. You will not need to use any of these if you don't want to):

USEFUL KEYS:

- **CTRL** (the Control Key). Used for program shortcuts (you hold both keys down simultaneously).   Useful CTRL sequences are: CTRL-S to save a file and CTRL-Q to quit a file. Other helpful sequences are: CTRL-C to copy, CTRL-X to cut, and CTRL-V to paste (for text-editing).

- **ALT** (the Alternate Key). Useful in DOS programs to activate the menu bar at the top of the screen (Hold down ALT and press the underlined letter).

- **ENTER** (or RETURN on older models). Tells the computer that you've finished a statement. Note that text automatically wraps on screen - you do not need to hit "ENTER" to move the cursor back to the start of a line.

- **BACKSPACE** allows you to delete the character preceding the cursor.

- **BACKSLASH (\)**, use for navigating around DOS files (example: C:\Program Files\ is the folder "Program Files" on the C: drive). The backslash symbolizes a folder.

- **SLASH (/)**, used frequently in web addresses (example: http://www.nysoclib.org/newbooks/ is the folder "newbooks" on the nysoclib.org website). Similar to the backslash, the slash also symbolizes a folder.

VITAL HARDWARE:
THE MOUSE

This is the secondary input device. It is theoretically possible (but not easy) to maneuver around Windows without a mouse (it is impossible without a keyboard).

A mouse is a hand-held device that controls the movements of a pointer on your screen. When you position the pointer over an object, you can press (click or double-click) the mouse button to perform different actions on the object. For example, you can double-click to open and work in files, click and drag to move files and click to select files. The pointer usually appears as an arrow, but it can change shape.

You perform most of the tasks on your computer by pointing at an object on your screen, and then clicking a mouse button. To point to an object, move the mouse until the tip of the mouse pointer is over the item or area you want.

For now, if your mouse has three buttons, ignore the center one. The only two buttons that you will need to use are the left and right ones.

THE FOUR COMMON MOUSE ACTIONS:

Click: Press and release the left mouse button once

Double-click: Quickly press and release the left mouse button twice (this needs to be done rapidly - if you're too slow, the computer will not open the program)

Right-click: Press and release the right mouse button once.

Dragging: To move a screen object, you first position the mouse pointer on the object. Next, you "pick up" the object by pressing and holding down the left mouse button. While you're still holding down the mouse button, move the mouse pointer to where you want to "drop" the object, and then release the mouse button. You also drag to select text, such as works in a document or the name of a file. To select text, you first insert your cursor (a blinking vertical line) where you want to start the selection. Then you hold down the left mouse button, move the mouse pointer to where you want to end the selection, and release the mouse button.

HARDWARE:

PRINTER

The printer is a secondary output device and allows you to make a hard copy of the information on the monitor. The three major printers today are: dot-matrix, ink-jet and laser. Dot matrix printers use a grid of dots to create an image and are usually quite noisy. Ink-jet printers shoot the ink (either color or black) onto the paper via small nozzles. Laser printers engrave a temporary image on the internal drum and are currently the fastest printers available (they are also the most expensive). My personal favorite is the inkjet printers for ease and flexibility (this document was printed on an inkjet printer)

MODEM

The modem is a communications device for your computer (it stands for "modulator/ demodulator", in reference to the sounds it makes). Modems use an ordinary phone line to link your computer with other computers (i.e. the Internet). Modems can be internal (connect phone line to back of computer) or external (connect phone line to modem and modem to computer). Most modems are 56K, which stands for the speed of the modem, not the size (56 kilobytes of data transferred per second). There will be further discussion on modems in the "Introduction to the Internet" class.

SCANNER

Scanners are a secondary input device for your computer.   Scanners enables you to digitize (put into computer form) pictures and text (you need special text-recognition software for this feature). The two common types of scanners are: flatbed (desktop) and hand-held (portable).

SPEAKERS

Speakers are a secondary output device for your computer. Combined with a sound card (a hardware device installed separately in your system), you can listen to a variety of music and sounds stored on your computer. With a microphone (secondary input device), you can even use your computer (via an internet connection) as a primitive phone.

THE CONTROL PANEL

To see all the peripheral devices installed on your computer in Windows 95 or Windows 98, select START -> Settings -> Control Panels. Useful icons here are: Display, Keyboard, Modem, Mouse and Printers

OPERATING SYSTEM:
DOS: Disk Operating System

```
C:\>
```
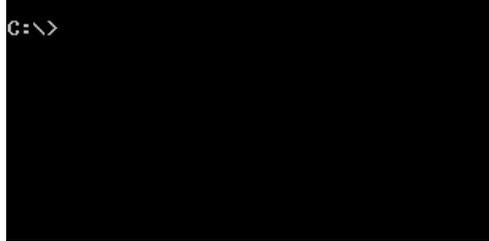
The first PC operating system was DOS (short for "disk-operating system"). DOS relied entirely on typed commands (it was designed before the mouse), and is still in effect today (MS-DOS, Microsoft's version, is the underlying operating system for Windows).   I've included DOS here to give you a feel for the structure of the PC.

Basic DOS Commands:

date	Sets the system date	**del**	Deletes a file
time	Sets the system time	**md**	Makes subdirectory
dir	Lists all files	**cd**	Changes subdirectory
copy	Copies a file	**..**	Moves up one level
cls	Clears the screen	**a:**	Changes to A: drive
type	Displays file contents	**print**	Prints file
rn	Renames a file	**exit**	Exits from DOS

FILE EXTENSIONS:

All PC files are assigned a three-digit extension following the "." (period). This tells the computer what program was installed and is still used today. An asterisk (*) is used as a wildcard to list all files of a particular type i.e. C:**dir *.exe** will list all executable programs in your current folder).

Sample Extensions:

*.bat	Batch of DOS commands	***.bmp**	Bitmap Image
*.com	Compiled program	***.jpg**	Photo Image
*.exe	Executable program	***.gif**	Graphic Image
*.sys	System information	***.txt**	Text-based document
*.ini	Initialization data -system	***.doc**	MS Word document
*.dll	Dynamic links library file	***.xls**	MS Excel spreadshee

BASIC (Beginners All-Purpose Symbolic Instruction Code)

BASIC is an introductory programming language that uses words such as PRINT, INPUT, GOTO, IF and THEN to create new programs.   The most recent version of Basic, QBASIC (short for Quick Basic), comes with the Windows 95 & 98 CD-ROM and needs to be installed to run. It's found in the folder: E:**other\oldmsdos** for Win95 or   E:**tools\oldmsdos** for Win98 and needs to be copied into the C:**windows\command** folder. One installed, you can start writing programs for your computer.

OPERATING SYSTEMS:
Microsoft Windows 3.x

The first upgrade from DOS was a GUI (graphics user interface) that ran over DOS and allowed the user to run several programs simultaneously. Windows 3.x (where "x" denoted a different version) suspiciously resembled the Macintosh operating system (not a coincidence) and is still running on some of the older PC's.

Useful Windows programs are:
- Notepad   A simple text editor
- Cardfile   Allows user to organize facts on index cards
- Calculator   A simple calculator
- Calendar   An online appointment system
- Clock   Displays a clock with the current system time
- Terminal   Provides modem for bulletin boards
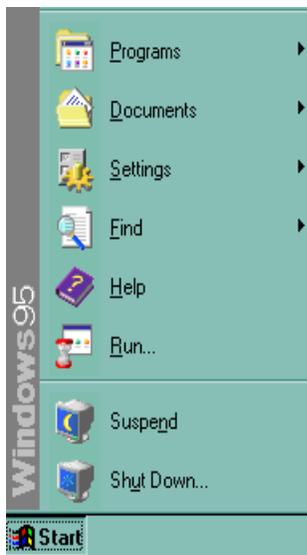
Microsoft Windows 95

Windows 95 is comprised of:
- **Windows**   views files or part of an application
- **Icons**   small pictures of files and programs
- **Menus**   drops down to display further options
- **Pointer**   dragging mouse around desktop

In addition, the Windows environment has a:
- **Desktop**   working area on screen *(center)*
- **Taskbar**   informs user of what's being run *(bottom)*
- **System Tray** special programs on right of bar *(b-right)*
- **Start Menu**   fast and easy access to software *(b-left)*

Microsoft Windows 98

Microsoft Windows 98 has all of the features of Windows 95, but with easier access to the Internet and faster 32-bit access (this means that the computer can read 32 bits of information at a time instead of the 16-bits previously read in Windows 95). In practicality, however, there's very little difference between the two operating systems

Microsoft Windows 2000

This is the most recent version of Microsoft Windows. It diminishes the amount of crashes and conflicts with earlier versions, gives better access to files, and has more features than Windows 98. It's still in the prelimary stages.

GETTING STARTED:
TURNING ON THE COMPUTER
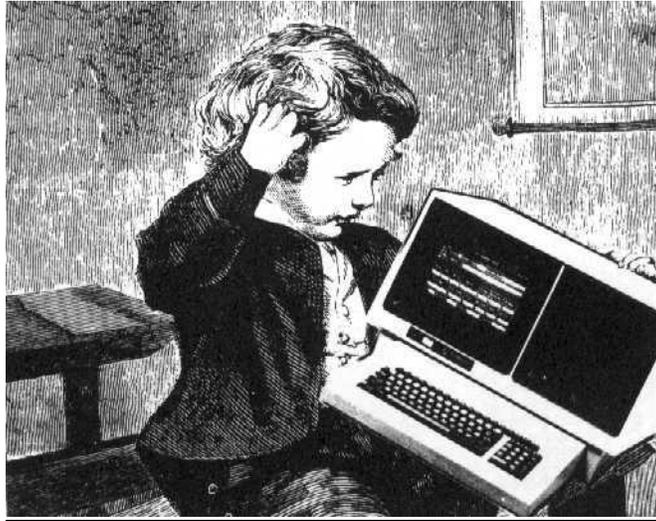
On desktop computers, the "On" button is usually the largest button on the front of the computer. The smaller, less prominent button is a "Reset" button and only works when the computer is on.   On laptop computers, the "On" button is generally located on the left-hand side, towards the back of the computer. This button is somewhat depressed and requires you to hold it in for a second or so before releasing it. When you turn your computer on, it runs a check for all the components connected to it (i.e. monitor, printer, keyboard, mouse). If there is a disk in the floppy disk drive, it will try to boot from this and will give you an error message ("Non-System Disk"). Remove the disk and tap any key on the keyboard to resume the boot.

TURNING OFF THE COMPUTER

You can turn off the computer at any time by pushing the same button that you used to turn the computer on.   However, this will also upset your computer and cause it to run a nasty error message when your computer starts up the next time ("You did not close Windows properly").   An error-free (better) way to turn off your computer is by clicking the "Start" button in the lower left-hand corner of your screen and selecting "Shut Down" from the option menu. Sometimes the computer will automatically turn off, other times it will give you an OK message to turn your computer off.

RESTARTING YOUR COMPUTER

You will only need to restart your computer when it crashes (i.e. everything on the screen locks up and you are unable to open any programs). The best way to restart your computer is by holding down the "CTRL"-"ALT"-"DELETE" buttons simultaneously. If your system isn't entirely frozen, this will bring up a menu of currently running programs which you can individually shut down (especially if one of them has a "Not Responding" error message next to it). Barring that, hit "CTRL"-"ALT"-"DELETE" (also known as Control - Alt - Delete) again to restart the computer.

Otherwise, you can push the second, smaller button on the front (also known as the "panic" button) to restart your computer. You will get an error message every time you restart your computer this way, but it's unavoidable at times.

GETTING STARTED:
(taken from Introducing Windows 95
& Getting Started with Microsoft Windows 98)

UPPER-RIGHT HAND BUTTONS

These are useful program shortcuts. The "__" button will move your program down to the task bar, freeing up your desktop work space (click the appropriate button on the taskbar to restore). The center box button will expand your window to fit the entire screen (or reduce your windows to see other programs running). And the "X" button will shut your program down

RUNNING A PROGRAM

You can use the Start button to start any program you want to use, such as your word processor program. Click the Start button, and then point to Programs.   Point to the folder, such as Accessories, that contains the program, and then click the program.   A new button for the program appears on the taskbar. To quit a program, click the Close button (an "X") in the upper right corner of the window. You can run as many programs as you want at the same time. Windows makes it easy to switch between programs or windows - click the taskbar button for the program you want. *TIP:* You can add a program to the top of the Start menu by dragging its icon onto the Start button.

SAVING YOUR WORK

To save the changes you've made to an existing document or the work you've done into a new document, you need to save the document.   To save changes to an existing document, on the File menu, click Save.   To save a new document, on the File menu, click Save As. Type a name in the File Name box. To change the file type, click the arrow next to Save as type, and then click the type you want. To save to a different drive and/or folder, open the Save In list, click the drive you want, and then double-click the folder. Click Save to complete the operation.

COPYING A FILE TO DISK

Double-click My Computer. Find the file or folder you want to copy, then click it once. On the file menu, point to Send To, and then click the drive where you want to copy the file or folder. You can select multiple items by pressing and holding down the CTRL key as you click each item you want, or by clicking Select All on the Edit menu to select every item in the window.

DELETING A FILE OR FOLDER

Double-click My Computer. Find the file or folder you want to delete, and then click it. On the File menu, click Delete. A quicker way to delete a file is to drag it to the Recycle Bin on the desktop. The files you place here aren't removed from your hard disk until you "empty" the Recycling Bin.

GETTING STARTED:
(taken from <u>Introducing Windows 95</u> and
<u>Getting Started with Microsoft Windows 98</u>)

INSTALLING SOFTWARE
Click the Start button, point to Settings, and then Control Panel. Double-click Add/Remove programs. Follow the instructions on your screen.
Alternately, look for a file called install.exe or startup.exe on the installation disk or CD and run this directly by double-clicking it.

PLACING SHORTCUT ON DESKTOP
In My Computer or Windows Explorer, locate the item you want easy access to. Use the right mouse button to drag the item to the desktop. Then release the mouse button. Click Create Shortcut(s) Here. The shortcut appears on your desktop.   You can put a shortcut in any folder, in addition to the one on the desktop.   When you delete a shortcut, the original file is not deleted. If you delete the file, the shortcut is not deleted automatically.

SEARCHING FOR FILES OR FOLDERS
If you don't know where a document or folder is, you can use the find command to find and open it Click the Start button then point to Find. Click Files or Folders. Click the named box, and then type the name of the file or folder you want to find. To specify where to search, click the arrow next to the Look In box, or click Browse. To start the search, click Find Now.

PRINTING A DOCUMENT
To print a document if the file is open, click File then click Print.   An easy way to print is to drag the icon for your document onto a printer desktop shortcut icon.   If you have problems printing in Windows, you can use the printing troubleshooter indicated in Help. The troubleshooter helps with problems such as your documents printing incorrectly or not at all.

COMPUTER FRUSTRATION
At some stage in this process, you will encounter computer frustration (whether it's being unable to find a file you recently saved or having the computer crash repeatedly). This is quite common, as you're learning how to use a complicated device; my best advice is to save anything that you're able to, turn the computer off for well over a minute (giving time for the hard drive to stop processing information), take a deep breath (go out for coffee or a cigarette, if needed), and start again, fresh. Take heart - most computer problems are solved by turning the computer off for a minute and rebooting.

SOFTWARE:
WINDOWS EXPLORER
(pre-installed with Windows 95 & 98)

(taken from Introducing Windows 95 and Getting Started with Microsoft Windows 98)

Opening Windows Explorer gives you a view of your computer's contents as a hierarchy, or "tree". You can easily see the contents of each drive and folder on your computer, as well as any of the network drives you are connected to".

To see the hierarchy of folders: Click the Start button, point to Programs, and then click "Windows Explorer".   Your disk drives and folders appear on the left site. To show or hide folders on the left side of the windows, click the plus or minus sign beside the folder.   The right side of the window displays the content so the item you click on the left. You can open a document or start a program by double-clicking its icon in the right side of the window.

WINDOWS EXPLORER SHORTCUTS:
- To Rename an Item   Press **F2**
- To Find a Folder or File   Press **F3**
- To Delete Immediately   Press **SHIFT-DEL**
- To View Item Properties   Press **ALT+ENTER**
- To Select All   Press **CTRL+A**
- To Refresh a Window   Press **F5**
- To View One Level Up   Press **BACKSPACE**

SOFTWARE:
CALCULATOR
(pre-installed with Windows 95 & 98)
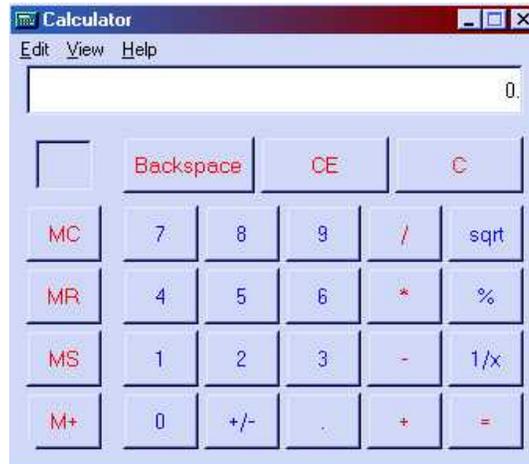
Standard Calculator

To run the calculator, Click **START -> Programs -> Accessories -> Calculator**.

You can use either your mouse to point at the buttons, or the number pad on the computer keyboard (or the numbers across the top of the QWERTY keys)

There are two types of calculators available: a standard calculator (default) and a scientific calculator (with trigonometric functions). If you want to change the calculator from standard to scientific, choose "Scientific" from the view menu. To close the calculator, click the X button (close button) in the upper right-hand corner.
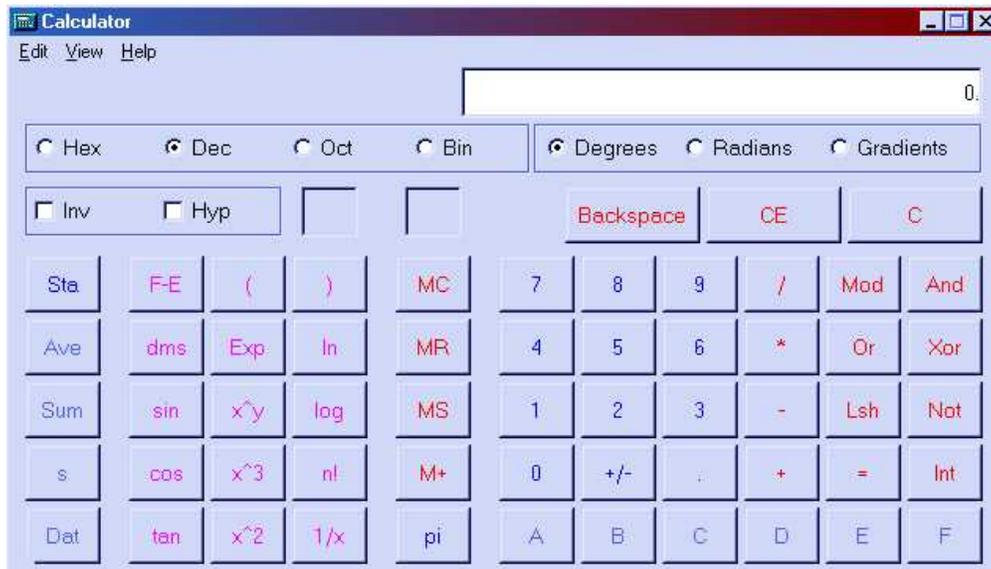

Scientific Calculator

SYSTEM SOFTWARE:
## CLOCK
(pre-installed with Windows 95 & 98)
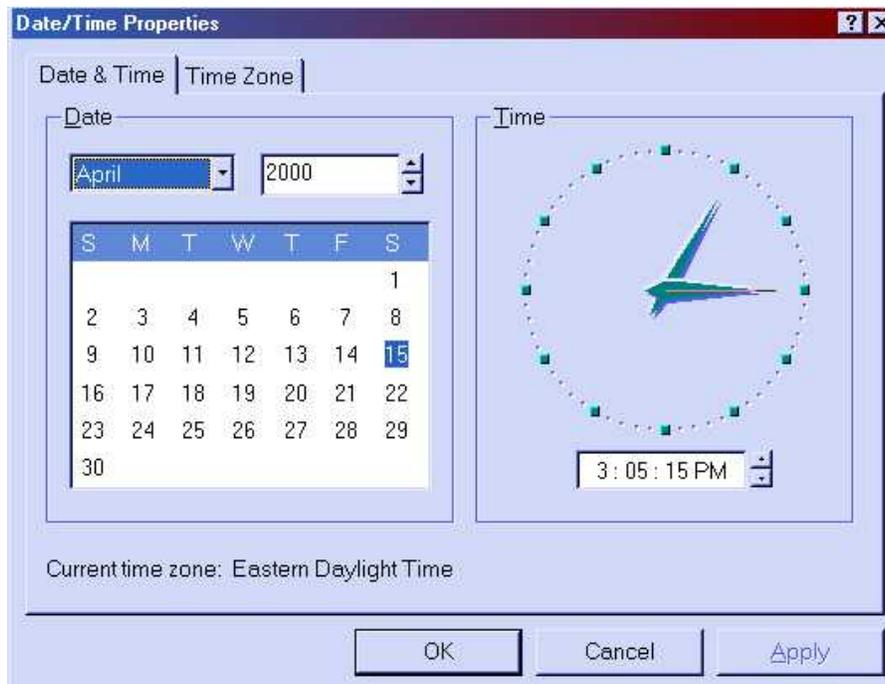
To view the clock, double-click on the time in the lower right-hand portion of your screen.   To change the time, move the cursor to the number field (3:05:15 PM), insert the blinking icon between the numbers you wish to change, then click either the up or down arrow (alternately, you can type the number instead).   To change the day, click on the appropriate date. Likewise, to change the month or year, click the arrow to the left of each for a drag-down menu.
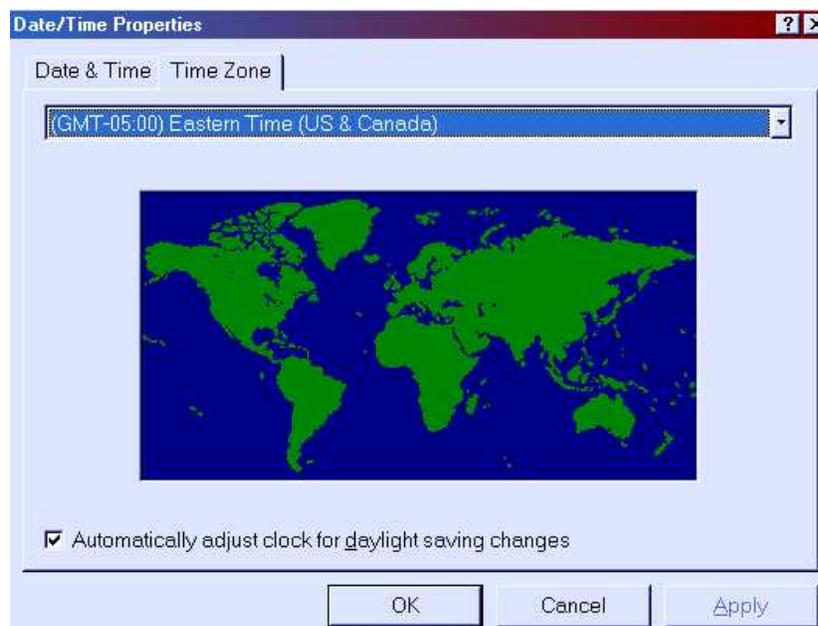
For fun, double-check the time-zone by clicking the appropriate box under the "Date/Time Properties" header. Check to see if you're in the proper time zone.

GRAPHICS SOFTWARE:
PAINT
(pre-installed with Windows 95 & 98)
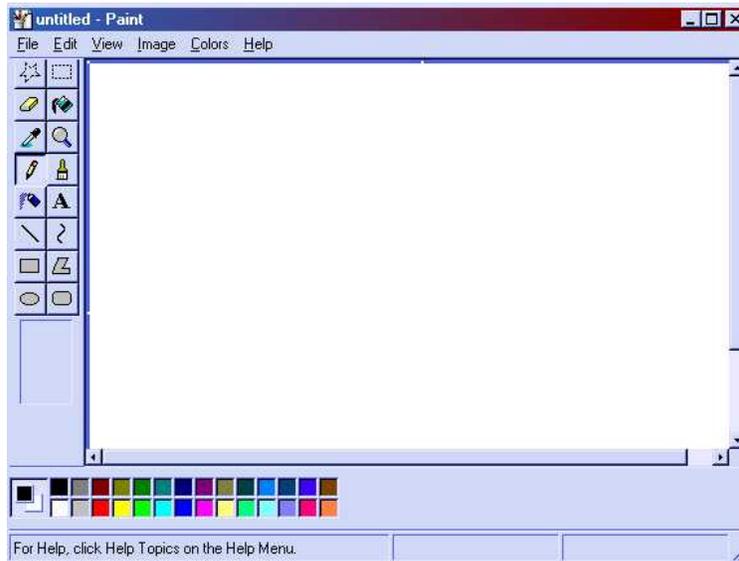
You can create, edit or view pictures by using Paint. You can paste pictures into other documents you've created, use them for your desktop background, view photos that you have scanned, and more. Move the mouse pointer to the middle of the screen. Then drag (move the mouse while holding down the mouse's left button). As you drag, you'll be drawing a squiggle. When you draw, you're normally drawing in black. At the screen's bottom, you see additional colors. To draw in one of these colors instead of black, click the color that you want.

The buttons (in order) at the top of the screen are:

Free-Form Select	**Select**
Eraser	**Fill With Color**
Pick Color	**Magnifier**
Pencil	**Brush**
Airbrush	**Text**
Line	**Curve**
Rectangle	**Polygon**
Ellipse	**Rounded Rectangle**

May of these will cross over into other graphics programs. The buttons I find most useful are: Eraser, Fill with Color, Pencil, Brush, and Text. Everything else is nice, but not essential.

To use a button, push it in by clicking it. When you start using Paint, the computer assumes you want to use the Pencil, so it pushes the Pencil button in. If you want to use a different tool, click a different button instead.

The computer pictures on Page 3 of this document were designed in Paint.

GRAPHICS SOFTWARE:
MICROSOFT PHOTO EDITOR
(packaged in Microsoft Office 97)
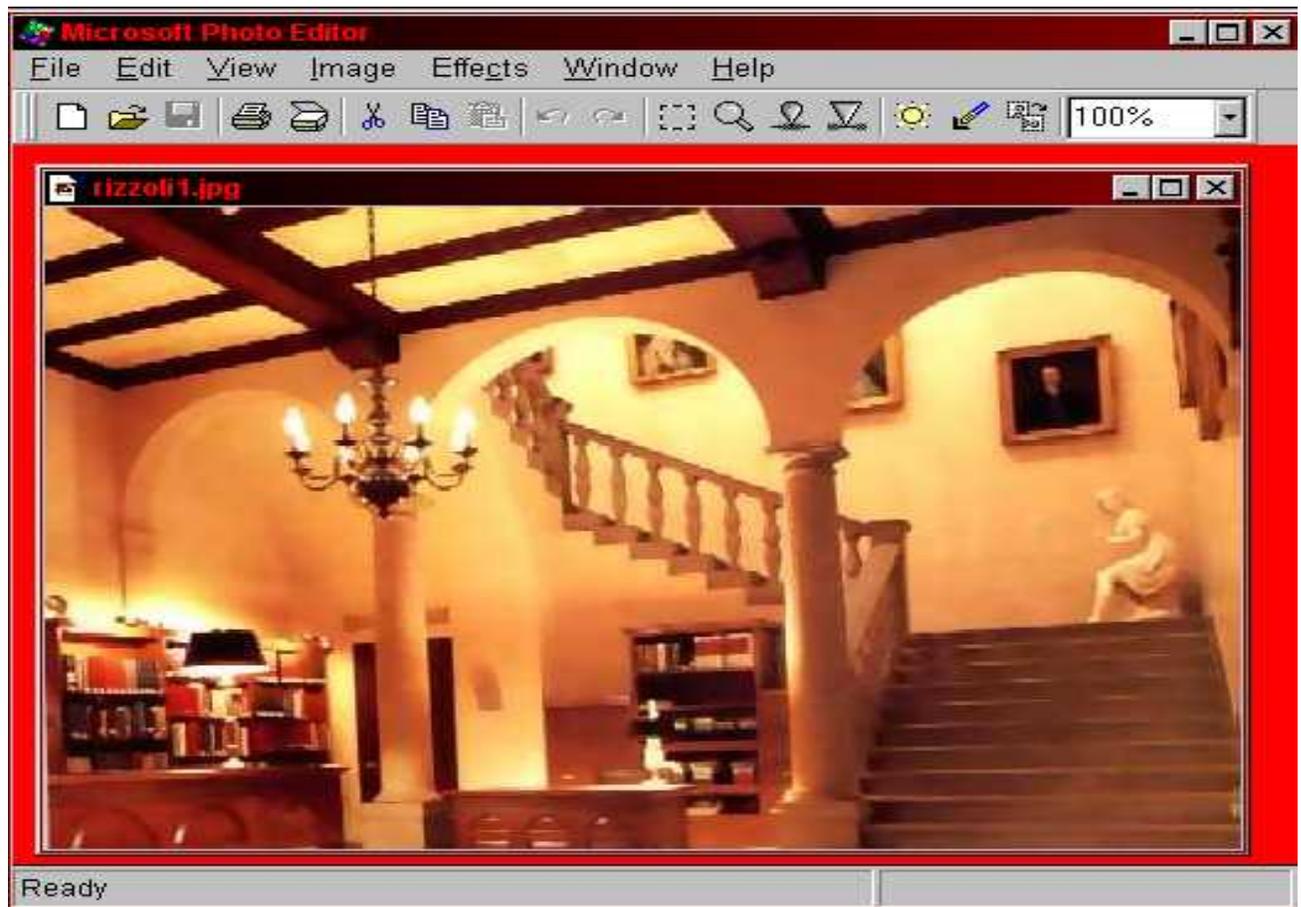
This is a slightly more complex and very useful graphics program. Most notable is its use of modifying pictures.

To modify an existing image, select FILE-> Open and find the appropriate picture. Once loaded, test out the properties under the IMAGE menu: CROP (use the dotted line on the dashboard panel to select what section you want in a different picture), RESIZE (makes the picture larger or smaller), ROTATE (flips in any direction), BALANCE (changes the brightness and contrast) and AUTOBALANCE (my favorite - selects the best balance for the picture, given the colors)

For further modification fun, select the EFFECTS menu: SHARPEN (takes any hard line and reinforces it), SOFTEN (does the reverse), NEGATIVE (flips the colors), DESPECKLE (removes inconsistent bits of color), POSTERIZE (solidifies and reduces the colors on the palate), EDGE (super-emphasizes borders).

Additional features in EFFECTS that will alter the texture of the picture are: CHALK & CHARCOAL, EMBOSS, GRAPHICS PEN, NOTEPAPER, WATERCOLOR, STAINED GLASS, STAMP and TEXTURIZER.

When saving your modified image, it is standard to save photos as JPG and graphic images (such as banners or buttons) as GIF.

TEXT-EDITING SOFTWARE:
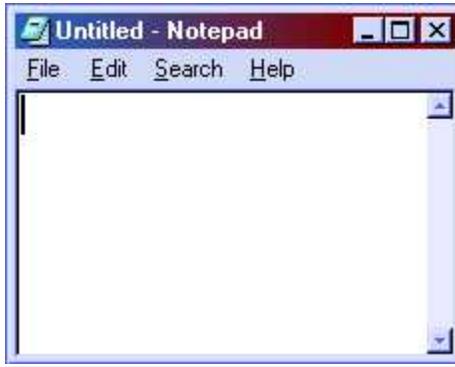
NOTEPAD
(pre-installed with Windows 95 & 98)

An extremely simple text-editing program included with Windows 95 & 98. It allows you to create, edit and save simple text and is handy in that it doesn't take much memory to run.

WORDPAD
(pre-installed with Windows 95 & 98)
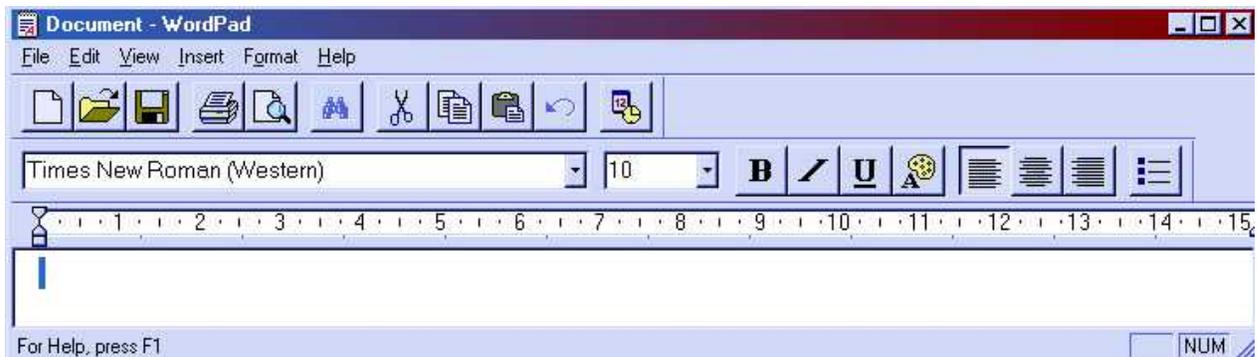
Windows includes a new text editor that you can use to work on short documents. Among its features are a toolbar for quick access to common tasks, a format bar with buttons for quickly formatting text, a full range of fonts for you to select from. Not as sophisticated as Microsoft Word, but fancier than Notepad.

The icons at the top of the menu (which will cross over into Microsoft Word) are:
- New Document (icon resembles piece of paper)
- Open Document (icon resembles manila folder)
- Save File (icon resembles floppy disk)
- Print File (icon sort of resembles printer)
- Magnify Text (icon resembles magnifying glass and paper)
- Cut (icon resembles scissors)
- Copy (icon resembles two pages)
- Paste (icon resembles clipboard)
- Undo (icon resembles back arrow)
- Insert Time/Date (icon resembles mini calendar and clock)

One row down is the font type: (Times New Roman), font size (10 points) and options to bold, italicize, underline or align page to the left, center or right or add bullet points to subjects (see list above).

There is a ruler at the top of the page, and the cursor blinks in the section where you start typing.

TEXT-EDITING SOFTWARE:
MICROSOFT WORD
(packaged in Microsoft Office 97)
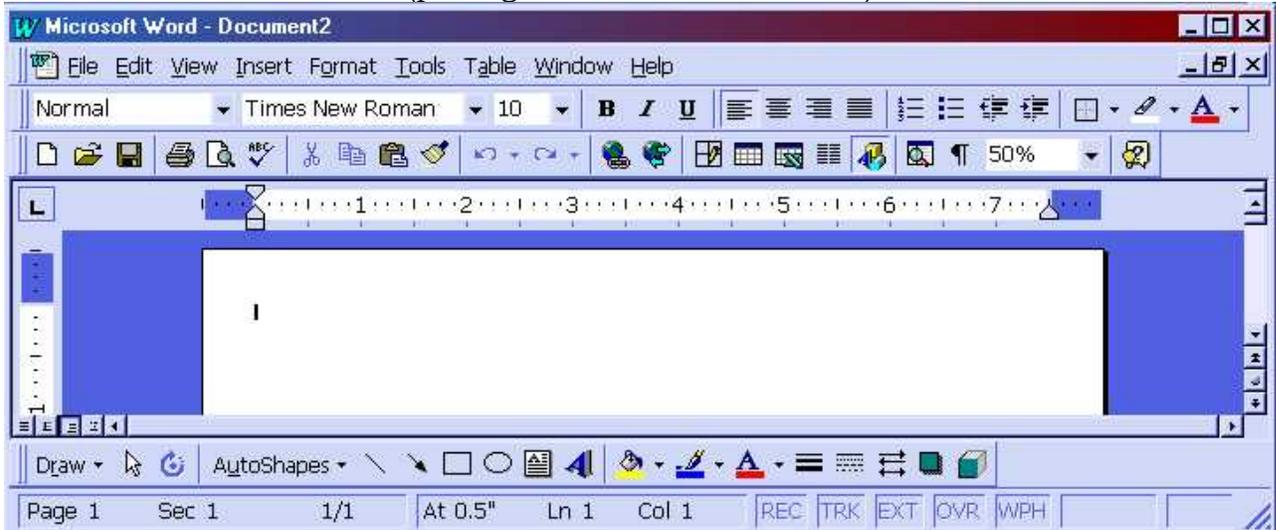
When you start Microsoft Word, the screen contains a fresh document surrounded by a "dashboard" of handy buttons, menus and other tools that you can use to work on your document.   The blinking insertion point shows where the text you type will appear.

For shortcuts to the more popular commands, click buttons on the Standard and Formatting toolbars.   Use the rulers to set tabs, indents and margins. Use the mouse pointer to click buttons, select text, and so on (the pointer shape varies with the task you're doing). Use the scroll bars to move around inside the document.   The status bar at the bottom shows details about your document, such as what page you're on.

- To create a new document, click the New button
- To insert today's date, click Date and Time (Insert menu)
- To bring other parts of the document into view, use the scroll bars (to the right and bottom of the page).
- To select any amount of text, drag over it. To select a word, double-click it. To select a line, click to the left of it. To select multiple lines, click to the left of a line and drag up or down.

The easiest way to move or copy text a short distance is drag-and-drop editing. To move text, select the text, point to it, hold down the mouse button, drag the dotted pointer to the new location and then release the mouse button.

HELPFUL TIPS:
1. To set up your default document settings: select FILE->PAGE SETUP. Make sure the margins and paper source are exactly as you want them, as well as the font size and type. Hit the "Default" button on this page and all the rest of your documents will be in this format. Very handy.

2. To print labels in Microsoft Word: have a document open first.   Select TOOLS -> ENVELOPE AND LABELS. Double-check the size of the label and click "New Document". The new page will be aligned for your specific labels.

3. Save your file in TXT format if you're planning on using another word processing program. Otherwise, use DOC (default setting)

SPEREADSHEET SOFTWARE:
MICROSOFT EXCEL
(packaged in Microsoft Office 97)
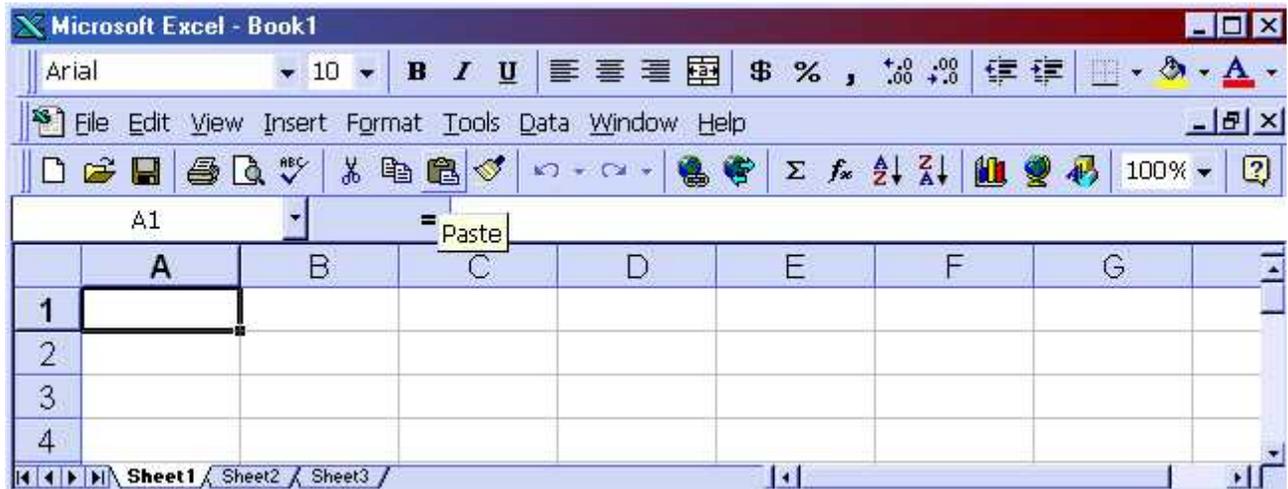
Most of the work you do in MS Excel will be on a worksheet. A worksheet is a grid of rows and columns. Each cell is the intersection of a row and column and has a unique address, or reference.   For example, the cell where column B and row 4 intersect is cell B4. You use cell references when you write formulas or refer to cells.

Generally you first select the cell or cells you want to work with, and then you enter data or choose a command. Selected cells appear highlighted on your screen. The active cell is the cell in which data is entered when you start typing. Only one cell is active at a time. The active cell is shown by a heavy border.

HELPFUL TIPS:

* To add a column of numbers, click on the cell directly below the numbers and type **=sum(A1:A3)**, where A1 is the starting cell and A3 is the ending cell. Hit ENTER to view the results.
* To add a row of numbers, click on the cell directly to the right of the numbers and type **=sum(A1:F1)**, where A1 is the starting cell and F1 is the ending cell. Hit ENTER to view the results.
* Take the average of a column by typing: **=AVERAGE(A1:A4)**
* To fill a column with the same number, highlight the cells you want filled (including the starting number to fill) and hold down CTRL-D (for "Fill Down")
* To sort a list of names, type CTRL-A (for "Select All") and choose DATA->SORT. You can sort in increasing or decreasing order.

MISC:
TIPS & TRICKS

- The mouse and keyboard use virtually identical slots in the back of the computer. If you've set up or moved your computer and are unable to use the mouse or keyboard for the first time, check to see if the cables are plugged into the right slots.

- Hit "ESC" at the Windows 95 Startup screen if you want to see what sort of scripts are running on your computer (this screen will tell you whether all your drivers are loading or not).

- Solitaire is an excellent way to become comfortable with using the mouse and is part of the Windows 95 and 98 CD-ROM for this very reason. To play Solitaire on your computer, select START -> PROGRAMS -> GAMES

- If you still have the installation disks (i.e. Microsoft Windows 95, Microsoft Word, etc.), there's no need to back up your entire computer. Back up only the files that you've created yourself (i.e. documents, spreadsheets, photos). For ease of backup, keep all original material in one location (I use C:/My Documents/ with subfolders for individual breakdown).

- Make a system startup disk by clicking START ->SETTINGS -> CONTROL PANEL -> Add/Remove Hardware -> Startup Disk. With a startup disk, you should always be able to boot your computer to a C: prompt (this is useful if you're having problems starting your computer).

- Keep a notebook by the computer and copy down discoveries and error messages verbatim. These will often tell you exactly what is wrong with the computer (even if it's in a horribly garbled manner).

- Run SCANDISK (checks your hard drive for errors) and DEFRAG (defragments your hard drive by putting all the individual programs memory in one location; speeds your computer up) by clicking START -> RUN and typing either SCANDISK or DEFRAG at the prompt.

- If you have space on your hard drive, take the Windows 95 (or 98) CD-ROM and copy the /win95/ (or /win98/) file directly onto your hard drive. Whenever you change any system settings and are prompted for the CD-ROM, point to this folder on your hard drive instead (it contains all the system settings).

- Suck mints or cough drops when dealing with especially irksome problems. They'll take your mind off the computer.

ADDITIONAL RESOURCES:
NYSL COMPUTER BOOKS

001.6 3	Berners-Lee, Tim	Weaving The Web	1999
001.6 B	Bradbeer, Robin	The Beginner's Guide To Computers	1982
001.6 B	Brod, Craig	Technostress	1984
001.6 B	Bear, John	Computer Wimp No More	1992
001.6 B	Branwyn, Gareth	Mosaic Quick Tour For Windows	1994
001.6 B	Bryan, C. D. B.	Close Encounters Of The Fourth Kind	1995
001.6 C	Crichton, Michael	Electronic Life	1983
001.6 C	Crevier, Daniel	AI: The Tumultuous History Of The Search	1993
001.6 C		Cyberspace: First Steps	1991
001.6 C	Caffarelli, Fabrizio	Publishing Yourself On CD-ROM	1992
001.6 C	Campbell-Kelly	Computer: A History Of The Information	1996
001.6 C	Casti, J. L.	The Cambridge Quintet	1998
001.6 E	Elshami, Ahmed M	Networking Cdroms	1996
001.6 F	Freedman, Alan	The Computer Glossary	1991
001.6 F	Freedman, David	Brainmakers	1994
001.6 F	Freedman, Alan	The Computer Desktop Encyclopedia	1996
001.6 G	Gookin, Dan	PCs For Dummies	1992
001.6 G	Gates, Bill	The Road Ahead	1995
001.6 G	Gilster, Paul	The New Internet Navigator	1995
001.6 G	Gelernter, David	Machine Beauty	1998
001.6 H	Hammond, Ray	Computers And Your Child	1984
001.6 H	Herbert, Frank	Without Me You're Nothing	1980
001.6 H	Herda, D. J.	Microcomputers	1984
001.6 H	Hintz, Sandy	Computers In Our World	1984
001.6 H	Hollerbach, Lew	A 60-Minute Guide To Microcomputers	1982
001.6 H	Heim, Michael	The Metaphysics Of Virtual Reality	1993
001.6 H	Hahn, Harley	The Internet Complete Reference	1994
001.6 H	Hafner, Katie.	Where Wizards Stay Up Late	1996
001.6 H	Holtzman, Steven R.	Digital Mantras	1994
001.6 J	Jortberg, Charles A.	The Internet	1997
001.6 K	Kelly-Bootle, Stan	The Devil's DP Dictionary	1981
001.6 K	Kurzweil, Ray	The Age Of Spiritual Machines	1999
001.6 L	Levy, Steven	Artificial Life : The Quest For A New Creation	1992
001.6 M	McCorduck, Pamela	The Universal Machine	1985
001.6 M	McWilliams, Peter	The Personal Computer Book	1982
001.6 M	Michie, Donald	The Knowledge Machine	1985
001.6 M	Mazlish, Bruce	The Fourth Discontinuity	1993
001.6 M	Morgan, Eric Lease	WAIS And Gopher Servers	1994
001.6 M	Moody, Fred	The Visionary Position	1999
001.6 P	Penrose, Roger	The Emperor's New Mind	1989
001.6 P	Penrose, Roger	Shadows Of The Mind	1994
001.6 P	Peterson, Ivars	Fatal Defect: Chasing Killer Computer Bugs	1995
001.6 P	Powell, Thomas A.	HTML: The Complete Reference	1998
001.6 R	Ritchie, David,	The Computer Pioneers	1986
001.6 R	Roszak, Theodore	The Cult Of Information	1986
001.6 S	Schank, Roger C.	The Cognitive Computer	1984
001.6 S	Shasha, Dennis	Out Of Their Minds	1995
001.6 T	Turkle, Sherry	The Second Self	1984
001.6 W	Weizenbaum, J	Computer Power And Human Reason	1976
001.6 W	White, Ron	PC/Computing How Computers Work	1993
001.6 W	Wiggins, Richard	The Internet For Everyone	
001.6 Z	Zinsser, William K.	Writing With A Word Processor	1983

ADDITIONAL RESOURCES:
BASIC COMPUTER TRAINING
from The New York Public Library Site

Baruch College, Continuing Education: 17 Lexington Ave, Box A 802-5600
  Fee? Yes   Offered: Day/Evenings
Chinatown Manpower Project: 70 Mulberry Street, NYC 10013, 571-1697
  Fee? No   Offered: Day
Correctional Educational Consortium: 500 8th Avenue, Suite 1207, 714-0600
  Fee? Yes   Offered: Day
Global Business Institute: 209 West 125th Street, NYC 10027, 663-1500
  Fee? No   Offered: Day
Henry Street Settlement: 301 Henry Street, NYC 10002, 254-3100
  Fee? No   Offered: Evening
Jericho Project: 2013 Adam Clayton Powell, Jr. Blvd., NYC 10027, 665-9444
  Fee? Yes   Offered: Day/Evening/W eekend
The Learning Annex: 16 E. 53rd St., NYC 10022, 371-0280
  Fee? Yes   Offered: Day/Evenings
Marymount Manhattan College, Continuing Education: 221 E. 71st St, 517-0564
  Fee? Yes   Offered: Day/Evening/Weekend
New School: 66 W. 12th St., NYC 10016, 229-5630
  Fee? Yes   Offered: Day/Evening/Weekend
New York City Mission Society: 646 Lenox Avenue, 10037, 212-368-8400 x21
  Fee? No   Offered: Day
Non-Profit Computing, Inc. :40 Wall Street, Suite 2124, NYC 10005-1301, 759-2368
  Fee? No   Offered: Day
NYC Board of Education, Office of Continuing Education: (718) 260-2100
  Fee? No   Offered: Day/Evening/Weekend
NYC Department of Administrative Services 2-26 Washington St, 10004, 487-5976
  Fee? No   Offered: Day
NYU, School of Continuing Education: 7 E. 12th St, 11th Fl, (800) FIND NYU ext. 26
  Fee? Yes   Offered: Day/Evening/Weekend
Pace University -Computer Learning Center: 551 5th Ave, 8th Fl, 10176, 346-1222
  Fee? Yes   Offered: Day
PC Learn: 687-2506
  Fee? Yes   Offered: Day
Post-Graduate Center for Mental Health: 344 West 36th Street 560-6720
  Fee? No   Offered: Day
The Seminar Center: 655-0077
  Fee? Yes   Offered: Evening
Stuyvesant Adult Center: 345 E. 15th Street, NYC 10003, 254-2890
  Fee? Yes   Offered: Evening
Sys Ed: 35 W. 35th St., 10th Fl., NYC 10001, 564-9147, 48, 49
  Fee? Yes   Offered: Day/Evening/Weekend
Train Central: 947-4210
  Fee? Yes   Offered: Evening
Universal Business and Media School: 220 E. 106th St. (bet. 2nd & 3rd Aves.), NYC
  Fee? Yes   Offered: Evening
Vocational Foundation, Inc.: 902 Broadway, 15th Floor, NYC 10010, 777-0700
  Fee? No   Offered: Day
YWCA: 53rd & Lexington Ave., 5th Floor, NYC, 751-3335
  Fee? Yes   Offered: Day/Evening