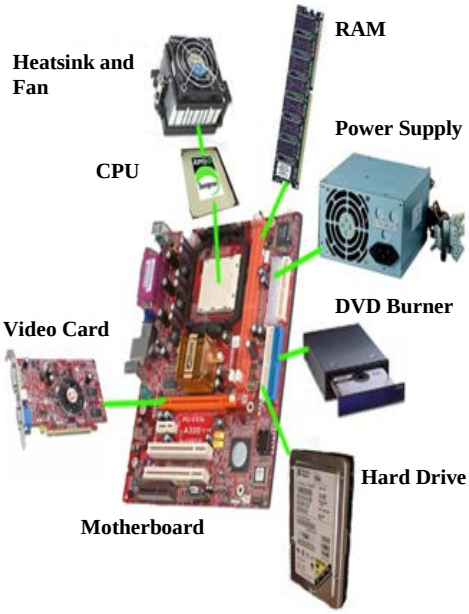
PC Basics with Windows 10

Introduction to PCs

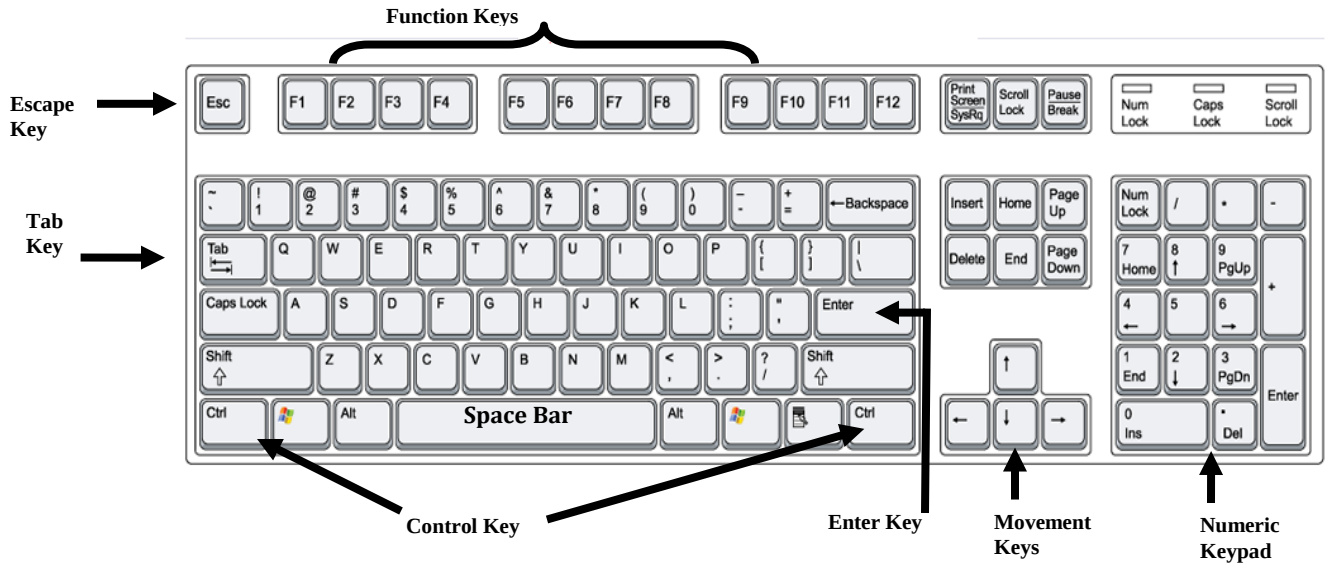
Mercer County Library System
Lawrence Branch
2751 Brunswick Pike
Lawrenceville NJ 08648
Phone: (609) 989-6923

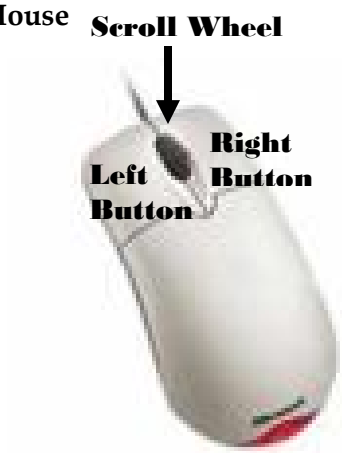
Mercer County Library System
Brian M. Hughes, County Executive

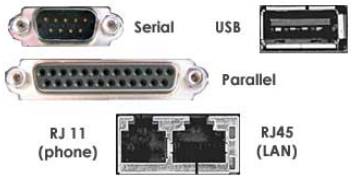
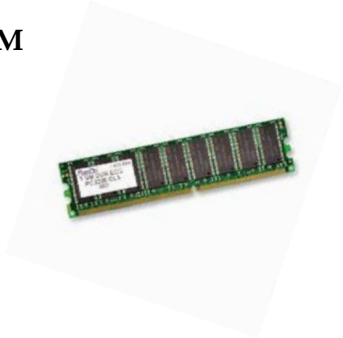
A. The Equipment: External Hardware & Internal Hardware

1. CD-ROM	CD-ROMs are compact discs, **read-only**, removable data storage media. CD Drives read the data encoded on the disc and then transfer this data to the computer. **CD-Rs** allow you to record data. **CD-RW** allows you to re-write data.
2. CPU  	**Central Processing Unit – Computer; Computer Tower; System Box** It is the computer chip that does all of the processing for the computer. Inside this tiny chip are millions of transistors (electrical switches) that are connected so they can carry out mathematical calculations. Everything a computer does is essentially a mathematical calculation. • Microprocessor Chip • Random Access Memory, RAM- A type of physical memory used in most personal computers • Hard Disk, Drive C: Large capacity storage • Floppy Disk, Diskette: Removable storage • CD, CDROM, DVD, Blu Ray: Removable Optical Memory • Internal Card Reader for Memory Cards • Ports, Outlets: Places for plugging devices such as: a. Power cord b. Keyboard c. Mouse d. Monitor e. Printer f. NIC-cat5 for Internet g. Sound -Speaker, Microphone h. USB -Universal Serial Bus i. I/O-Game controller j. PC Card or PC MCIA-Special port in laptops for connecting wireless card or other devices. **CPU Speed:** The central processing unit's (CPU) speed is measured in Gigahertz (GHz). Gigahertz is a unit of measurement commonly used to compare the speeds of computers. The higher the CPU's gigahertz rate, the faster it processes information and instructions. A megabyte is a large unit of measurement of storage capacity.

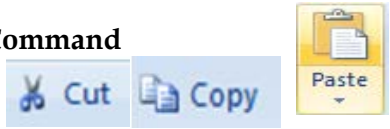
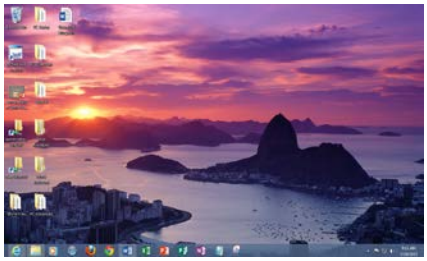
	Here is how storage capacity is calculated: • Bit = smallest amount of info. • Byte = eight bits strung together. • Kilobyte (KB or K) = 1000 bytes. • Megabyte (MB or Meg) = a million bytes. • Gigabyte (GB or GIG) = a billion bytes. • Terabyte (TB or tera): a trillion bytes.
3. DVD	**Digital versatile disk**. A high-density compact disk for storing large amounts of data, especially high-resolution audio-visual material. DVD drives read DVDs. A DVD holds about 5 gigabytes of information while a CD-ROM only holds about 700 megabytes. A CD-ROM drive cannot read a DVD. However, DVD drives can read CD-ROMs.
4. Flash Drive	Also known as a **thumb drive, jump drive, travel drive** or a **memory stick**. A removable storage device that is small, lightweight, and rewritable. They are compact, fast, hold a large amount of data, and are more reliable due to their lack of moving parts. They have to be plugged into an USB port that is usually situated on the front of your computer tower.
5. Floppy Disk	An economical, removable storage device. You can record or erase data on a floppy disk and then remove it from the computer. You can use the removable disk repeatedly. To read or write to a floppy disk, insert the disk into the floppy disk drive slot on the front of your CPU tower. **Because floppy disks are small in capacity and easily corrupted they are no longer available in new computers.**
6. Hard Drive	The hard drive, or hard disk, is your PC's main storage device. Data is magnetically stored there. Hard disks are noted for their speed and high storage capacity. It's sometimes called the C:/ drive. A typical hard disk holds from 250 to 500 gigabytes of storage. Much larger hard drive capacity is available. An external hard drive can easily be added and has three main purposes: to expand your computer's storage capacity, to back up your data, and to share data between computers.
7. Keyboard	Keyboards are designed for the input of text and characters and also to control the operation of a computer.

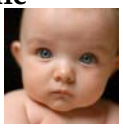


8. Monitor	**Screen, Display- Visual output device** A monitor is the TV-like part of the computer that you look at to see information. Monitors are sometimes called displays or screens. "Screen" refers to the glass front only, while "monitor" refers to the screen, the case and everything inside the case. Information on a monitor is displayed in pixels.
9. Mouse 	**Input device** • Left Mouse Button selects with one click (or press) or double click. • Right Mouse Button used to display program specific menus • Scroll Wheel allows you to move up and down the screen A device that controls the movement of the cursor or pointer on a display screen. Think of it as a remote control for your computer. As you move the mouse, the corresponding arrow, commonly known as the cursor or pointer, moves on the computer screen. Using the mouse to command the computer to do most tasks can eliminate many keyboard strokes. To move the cursor with the mouse, place the pointer where you want the cursor to appear and click the mouse.
10. Modem	A modem is the communications hardware that allows your computer to send and receive information from other computers over a telephone line or cable. Most new computers come with internal modems. If you have an older computer you might have an external modem -- a small box with a phone jack connected to your computer. You will need a modem (and a telephone line) to hook up to online services and the Internet.
11. Network Card	**Device computer needs to communicate over the Internet. An internal modem is a kind of network card.** • Modems have a maximum rated transmission speed (28.8KB, 32KB, 56KB) limited by line condition. • NIC (Network Interface Card) Speeds up to 1GB for Ethernet

	(broadband/cable) Internet. • Wireless Card- Graded A, B, G, or N-can go up to 600 MB without using a wire to connect to the Internet.
12. Ports or Outlets  	A port on your computer can be used to power devices or transfer data. Ports are used to plug in keyboard, mouse, printer, or a Flash drive. USB is one common type of port. Another type of port is used to plug in a microphone or headset.
13. Printer 	**Output Device** • Laser- uses lasers to imprint image on paper • Inkjet- Sprays ink from a cartridge; easily provides color; cost-effective for low volume printing.
14. RAM 	**R**andom **A**ccess **M**emory. The computer's primary working memory that can be used by applications to perform necessary tasks while the computer is on. The RAM is temporary storage-it needs to be running to "remember" what it is doing. In case of a system failure or power interruption, you will lose all of your work in RAM that you have not saved on your hard drive. It is read/write memory. (RAM is distinguished from ROM, which is read-only memory.) The more RAM you have the faster your computer works and more your computer can do at the same time. **RAM vs. Hard Drive Storage** The hard drive is where the programs are stored, RAM is where it works. The amount of space a program needs for storage on the hard drive has nothing to do with how much RAM is needed to run the program. Many PC programs take up several megabytes of storage space. Many programs also require at least 16MB to 32MB (or more) of RAM. To run today's popular programs, make sure your computer has adequate RAM and storage.
15. Scanner 	Converts images to a digital computer file. Documents, (letters, photographs, etc.) can be scanned and saved on the documents folder or printed.
16. Server	A server is a computer system that provides services to other computing systems—called clients—over a computer network.
17. Speakers 	Plays music, sounds or speech. Speakers can be internal or external.

B. Software & Other Computer Terms

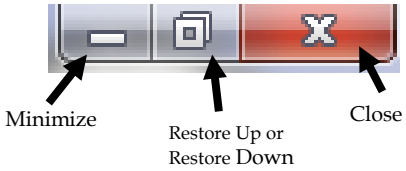
18. Software Applications or Programs	Software applications are programs that a computer uses to perform a specific kind of work. Applications such as Microsoft Word, Excel and Adobe Photoshop give the computer instructions which provide the user with tools to accomplish a task. Each application performs a specific kind of work, such as, word processing, accounting, personal finance, etc. There is an application for just about any task you can think of.
19. Backup	Create extra copies of files and folders in case the original copies are damaged or destroyed.
20. Boot	The loading of the operating system and starting of initial processes on a computer.
21. Browse	To look through files and directories, or search for information on the Internet.
22. Byte	A unit of storage capable of holding a single character. Abbreviation for "binary term." Related terms are kilobytes (a thousand bytes), megabytes (a million bytes) gigabytes (a billion bytes) and terabytes (a trillion bytes).
23. Command 	A word or phrase, found on the various tabs on the Ribbon or on the menu, that you choose in order to carry out an action. Example commands are Save, Format, Edit, Insert, etc.
24. Cursor or Pointer	Also called a pointer. An icon on the screen that moves when the computer's mouse is moved, allowing the user to "point" to a command or position on the screen
25. Desktop 	The Desktop is the working area (background) of the Windows display on your computer. When you start your computer, you will see several screens go by before you arrive at the main Windows screen, which is the Desktop. **On the Desktop:** • The icons or buttons on the screen are linked to tasks (programs) or documents on your computer. • Double-clicking with the left-mouse button with the mouse cursor over an icon opens a document or starts a task.
26. Dialog Box	A small window that appears temporarily to request information or to alert you to a condition. Dialog boxes usually request a response such as **OK** to continue or **Cancel** to stop an operation.
27. Disk Drives	Disk drives allow you to store and move data to and from different types of media. There are several types of drives: floppy drive, hard drive, CD-ROM drive, flash drive, and DVD drive. The biggest difference in drives is size or capacity. Drives also differ in how fast they find and access information.

28. Double-click	Clicking a mouse button twice in quick succession. Used to open a file, folder, or a program.
29. Download	To transfer data or code from one computer to another or from the Internet to your computer.
30. Drag	An action performed using a mouse to move files or folders from one place to another. Position the cursor or pointer on an item, press and hold the mouse button, move the cursor to a new location (by sliding the mouse), and then release the mouse button.
31. Driver	Special program used by Windows to operate a device. Printers, for example need a driver installed before they work.
32. Email	The abbreviation for "electronic mail," a method of transferring information from one computer to another over a network via phone or cable lines.
33. Ethernet	A form of network connection that is made by connecting a cat5 cable from a NIC card to either a router or cable modem. This connection is much faster than a phone line and does not need a modem to dial a connection to the Internet, so it is an "always on" connection.
34. File 	A collection of information, with a unique name, stored on your computer or on a removable disk. In the computer, music (songs) and video (movies) are all saved as files. A file may be a memo, music, a drawing done in a graphics application, a photograph, or a program itself.
35. Folder	Folders are special files that can hold multiple documents or files. They allow you to organize information. Folders can hold both files and other folders (subfolders). For example, you could put all of your letters to Aunt Mary in a folder with her name on it; or you could put the Aunt Mary folder into the General Correspondence folder, that holds many other files and folders.
36. Hardware	Physical components of your computer such as the CPU, disk drives, monitor, mouse and printer. Hardware is a term for the physical components that are included when you purchase a PC. You can purchase additional hardware items such as scanners, CD-ROM drives, DVD drives, video cameras etc.
37. Icon	A picture used to denote a program, command, or a file. Icons that have a small white arrow in the lower left corner are Shortcuts. The arrow indicates that the icon is a shortcut that points to a program, folder, or other item. A shortcut is a quick way to open a program or file. You can delete the shortcut or remove it from the Desktop without actually deleting the program or file.

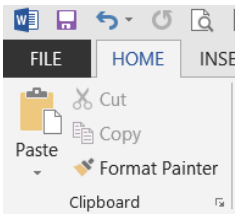
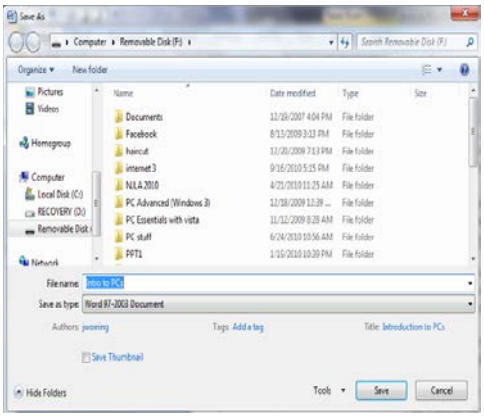
38. Insertion Point |	Flashing vertical bar in a text area which indicates where text that you type will be entered. Also determines where a picture will be inserted.
39. Internet	Network of computers and servers linked together to communicate with each other. The World Wide Web and Email are part of the Internet.
40. I-beam	Appearance of the cursor or pointer when it is positioned over an area in which text can be entered.
41. Menu	A list of options or commands from which the user can choose.
42. Open	To display the contents of a file in an application or to start an application. Opening requires two steps. To open a file, folder or program, you can 1) double-click, 2) click to select, then hit the "**enter**" key or 3) click to select and then click on an "open" button.
43. Operating System	The master control program for your computer. Popular operating systems are **Windows Vista**, **Windows 7**, **Windows 8**, **Windows 10**, **MacOS**, **Linux**, and **Unix**. It is the stored information that your computer needs to operate. Without an operating system all of the hardware would just sit there and collect dust!
44. Scrolling **Scroll Arrow** **Scroll Bar** **Scroll Arrow**	To scroll is to move through text or graphics (up, down, left, or right) in order to see parts of the file or list that cannot fit on the screen. An arrow on either end of a scroll bar can be used to scroll through the contents of a window or list box. A scroll bar will appear at the right and/or bottom edge of a window whose contents are not entirely visible. Each scroll bar contains a scroll box and two scroll arrows.
45. Select or Highlight	Selected or highlighted text indicates that an object or text is selected/chosen and will be affected by your next action. You can usually select an item by clicking on it with the mouse pointer. After selecting an item, you choose the action that you want to affect the item. To select text, you must click at the beginning of the word or phrase, hold the button down, drag the mouse to the end of the text and let go. Highlighted text changes color so you can see what is highlighted.
46. Software	The set of instructions that make computer hardware perform tasks. It tells the hardware how to work, what to do, and when to do it. Programs, operating systems, and device drivers are all software. It includes the basic operating system, or application programs, all expressed in a language your hardware understands. There is software to tell your computer how to do just about any task.
47. Taskbar	The taskbar is the horizontal bar along the bottom of the Desktop. Small rectangles around icons show the programs that are running. Near the right side, you will see the programs or tasks that start automatically

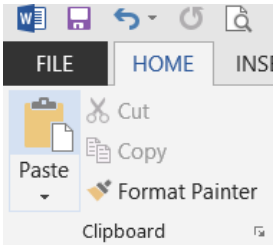
	when you start Windows. On the far right, you will see the time displayed. The taskbar allows you to start your navigation process through all of the computer files.
48. Upload	This is the opposite of downloading. With uploading, you take a file from your computer and send it to a computer on the Internet or a computer/ server on a network.
49. URL www.mcl.org	Uniform Resource Locator. A Website address which identifies the type and location of a resource on the Internet.
50. Web Browser	A program that lets you view, retrieve and send information over the Internet. Edge, Internet Explorer, Chrome, and Firefox are popular browsers.
51. Microsoft Windows	A family of operating systems that uses graphics to run programs. Developed by Microsoft for personal computers, it simplified commands and tasks by converting programs and commands to icons that we "click" to initiate.
52. ZIP File	The **ZIP** file format is a popular data compression and archival format. A ZIP file contains one or more files that have been compressed, to reduce their file size.

C. Working with Windows and Dialog Boxes

53. Common Features of Microsoft Windows software  	**Window**: an open program that displays a file, such as a document or web page. Multiple windows can be opened at one time. • The document title appears in a "title bar" at the top. • At the extreme right of the title bar are three buttons that control if the program runs minimized, in a maximized window, or if the program is to be exited (closed). • Below the title bar are program menu options such as Home, Share, or View. The menus give the full range of options that the software offers, and are accessible using either the keyboard or the mouse.
54. Selecting Choices on Menus	• One can select which menu item to act upon by clicking the left mouse button when the mouse cursor is on the item. • Text menus allow you to select one choice. • Radio buttons allow you to select one choice. • Dialog boxes allow you to type your own text. • Check-boxes allow you to select multiple answers. • Hitting the "Enter" key or left-clicking on "OK" will initiate the action.

D. Printing, Saving, and Opening Files

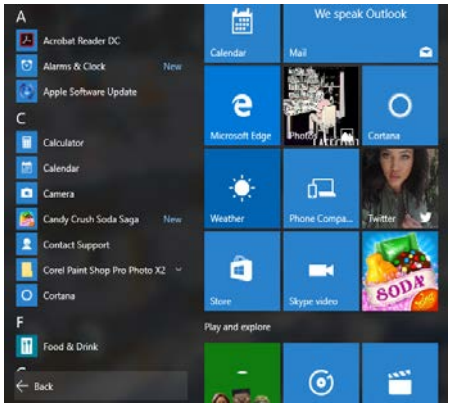
55. In Order to Print 	Left-clicking on a printer icon instantly prints all the pages but offers minimum control of printing. Using the print command from the **File** menu opens the print menu and lets you choose the number of pages and the number of copies you want to print. Here's how: Click on **File**. Then click on **Print** to open the **Print Menu**. Then use the options available to limit the pages printed and the number of copies printed.
56. Preview print layout	The **Print preview** option displays exactly how many pages the document will be, and the way your document will look after you print it. Print menu defaults to printing one copy of all pages. You may select a page range and number of copies to print from the **Print Menu** after you preview your document.
57. Saving files to the hard disk or flash drive 	When saving a new file for the first time the **Save As** menu box will appear. Using the **Save As** menu box, verify the **Save In** location is correct. **Use an identifiable File name such as "Tax Returns" not "document1".** With your document "open," from the navigation pane on the left, click on **Computer**. Find the flash drive, it may show as **removable disk,** and **double click** it. Now when you click on **Save**, the document will be saved on to your flash drive. If you use the **Save** icon (it looks like a floppy disk) on a newly created file you will get the **Save As** menu box, but once the file is named, the **Save** icon only updates the pre-existing file.

58. Open files  	• Click **File** button and choose **Documents** from the menu. **OR** • Select "Open" from the File menu. **To open a second "new" document you can do the following:** 1. From the File Menu, click on **New**. 2. Then double-click **Blank document** or click **Create** on the bottom of the dialog box.

E. <u>Windows 10</u>

59. Start Menu 	The Windows 10 Start Menu is an app launcher that displays rows of tiles. To scroll through the start menu, use the scroll wheel on the mouse, or click on the scroll bar at the right of the screen and scroll up and down. The Start Menu is an app launcher. To open any app in the Start Menu just click on its tile. Some of the tiles on the Start Menu are "dashboards," or "live tiles;" they update automatically to show you the weather, your email, the news, or sports information. To open the Start Menu, just click the Windows Key on your keyboard.

60. All Apps



Windows 10 has replaced the "All Programs" feature in the Start Button with "All Apps." To access All Apps, you click on the Windows symbol in the bottom left hand corner of screen, or press the Windows symbol on your keyboard. This opens up the Start Menu. You click "All Apps" in your Start Menu. You scroll through this list by using the scroll wheel on your mouse, or by using the scroll bar at the left of the "All Apps" list.

You can open any of these programs by clicking on them. You can pin any of these apps to the Start Menu by right clicking on the app and selecting "Pin to Start." You can pin an app to the task bar by right clicking on the App, pointing your mouse at "More," and clicking "Pin to Taskbar."