



- **CPU (Central Processing Unit)** - the brain of the computer. A chip located on the motherboard. Faster CPU chip means faster processing (with some limitations!)
- **RAM - Random Access Memory** - This is memory that programs use temporarily when your computer is running.
- **Modem** - Allows telecommunication between the computer, via the phone line/cable, to surf the web, to fax documents, to email family, etc
- **Hard Disk Drive** - Computer's primary storage space. Capacity is measured in byte, megabytes, kilobytes, gigabytes). Stores files and programs.

### Bits and Bytes

Computers talk in bits. Bits are either turned on or off. If a bit is turned on it's considered a "1", if turned off it's considered a 0. Bits are grouped into groups of 8 called bytes. Bytes are a common measurement of storage.

Size	Number of Bytes
Kilobyte (KB)	1 thousand bytes
Megabyte (MB)	1 million bytes
Gigabyte (GB)	1 billion bytes
Terabyte (TB)	1 trillion bytes

### Computer Speed

- Computer speed is measured by how fast the computer can turn on and off bits.
- Speed is measured in gigahertz (GHz) today. A 1GHz processor is switching on and off 1 billion times per second.
- Pentium D's are now available (Dual Core Technology, like 2 Pentium 4 chips, better multi-tasking)
- Overall speed of the computer is determined by how fast several pieces of hardware can interact. A fast CPU doesn't guarantee a fast computer but it sure helps!

### Attachments/Peripherals

The following are attached to the computer by cables:

- Mouse
- Keyboard
- Monitor
  - CRT - cathode ray tubes (bigger style)
  - LCD - liquid crystal display (flat panel and laptops)
- Printers / scanners / digital cameras /speakers / vidcams
- Portable storage devices

### Portable Storage Devices

Use to transport data from one computer to another or use as a backup.

- **3.5" Floppy Diskette (A Drive)** –stores 1.44MB
  - Need a floppy drive to read or write to a floppy disk
- **Flash/Thumb/Jump/USB Drives** – stores anywhere from 64MB to 3GB, attach to the USB port. The easiest and most stable way to store information.
  - Plugs into a USB port
- **CD-ROM** - stores 650MB
  - Need a CD-ROM drive to read, CD burner and software to write
  - CD burning requires burning software, unlike saving to a floppy or USB drive.
  - CD-R (Only can write to this type of CD once)
  - CD-RW (Can ReWrite to this type of CD many times, need a CD-RW burner)
  - CD-RW burners can burn CD-Rs but not vice versa.
- **DVD-ROM** -stores 4.5 (single layer, single sided) to 17GB (dual layer, dual-sided)
  - Need a DVD-ROM drive to read, DVD burner to write
  - NOTE: DVD drives can read both CD-ROMs and DVDs but not vice versa.



### Using Portable Storage Devices

1. Put your floppy disk in the computer (metal circle down, metal square first).
2. Put the USB/Thumb/Flash drive in the USB port. What happens?

## Match Making: Ports

- Ports are where the cables of the devices plug into the computer.
- It's almost always clearly evident which cable belongs to which port.



## Exploring Ports

Look at the ports on the back and side of your computers.

1. What kind of port is the mouse using?
2. What kind of port would a projector use?
3. Where would you put headphones?

## Using a Mouse

The mouse is your steering wheel to your computer!

- Roller Ball – on the bottom, use with mousepad. Laser mice (those with lights) do not need mousepads.
- Pointer/Arrow – moves around on the screen when the roller moves on the mouse pad. You are driving around on the screen!
- Hand – when moving around on the Internet, you will usually get a small hand when you
- Cursor – ( I ) blinks and typing will be inserted after this mark

**Clicking** – Puts your car in gear. Use your clicker to take off.

- Single Left Click – Use to select something or to place your cursor in a specific place.
- Double Left Click - Used to open applications, folders, or files.
- Right Click - A single click on the right button will bring up menu options that are available. These options change depending on where you are when you right click.

**Dragging and Dropping** – Lets you move objects, words, whatever around.

- Put your mouse on the object you want to drag.
- Hold down your left mouse button
- Move your mouse till the item is in the new spot
- Let go of your left mouse button



## Mouercise and Solitaire

The best way to learn how to use a mouse is to practice. Let's practice using the Mouercise Tutorial from the Palm Beach County Library.






- English version: <http://www.pbclibrary.org/mousing/>
- Spanish Version: <http://www.pbclibrary.org/raton/>

To get more comfortable dragging and dropping, try a couple games of solitaire. Every Windows operating system has solitaire built into it. You can find it by going to:

**Start > Programs > Accessories > Games > Solitaire**

## Windows - Shutting Down

When you click on the "Start" button there is a menu with "Shut Down" as an option. Click on this button. Older computers will display a screen that says "It is now safe to turn off your computer", then you can turn off the power button. Newer computers will just turn themselves off.

Ports	
<b>Monitor</b>	
<b>PS2</b> -keyboard -mouse	
<b>USB</b> -Universal Serial Bus -all purpose	
<b>Parallel</b> -for older printer or scanner	
<b>Ethernet/ Network</b> -used when connecting to an network	
<b>Modem</b> -used for Internet dial-up connection	