Computer Hardware

CGS 1000

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**Hardware and Software**

Hardware and software are the two basic parts of a computer system

**Hardware** - any part of a computer system you can touch

**Software** - a set of electronic instructions that tell a compute what to do.

**Peripheral** - Any piece of hardware attached to a computer.

**How Computer Work**

A computer collects, processes, stores and outputs information

**Input Device** - Lets you communicate with a computer. A keyboard, mouse, and joystick are input devices.

**Storage Devices** - used to place information on a storage media. A floppy drive, recordable CD-ROM, tape drives and DVD-ROM are considered storage devices

**Processor / CPU - Central Processing Unit** - the main chip in a computer. The CPU processes instructions, manages the flow of information through a computer system. The CPU communicates with input, output and storage devices to perform tasks.

**Output device** - lets a computer communicate with you. These devices displays information on a screen, printed copies, or generate sound.

**BYTES**

**Byte** - one character, a character can be a number, letter or symbol. Consists of eight bits.

**Bit** - The smallest unit of information a computer can process.

**Kilobyte (K)-** One kilobyte = 1024 characters. This is approximately equal to one page of double spaced text.

**Megabyte (MB)** - One Megabyte = 1,048,576 character. This is approximately equal to one book.

**Gigabyte (GB)** - One Gigabyte = 1,073,741,824 characters. This is approximately equal to a shelf of books in a library.

**Terabyte (TB)** - One terabyte = 1,099,511,627,776 character. This is equal to an entire library of books.

**INSIDE A COMPUTER**

**Power Supply -** Changes normal household electricity into electricity that a computer can use.

**Hard Drive** - The primary device that a computer uses to store information

**Floppy Drive** - Stores and retrieves information on a floppy disks

**RAM -** Temporarily stores information inside a computer. This information is lost when you turn off the computer.

**CPU -** The main chip in a computer. Processes instructions, performs calculations and manages the flow of information through a computer.

**Motherboard/System board** - The main circuit board of a computer. All electrical components plug into the mother board.

**Expansion Slot** - a socket on the motherboard.

**Expansion** Card - Lets you add new features to a computer.

**Drive Bay** - A space inside the computer case where a hard drive, floppy drive, CD-ROM or DVD-ROM drive sits.

**Cables/Connectors**

**Port** - a connector at the back of a computer where you plug in an external device such as printer or modem. This allows instructions and data to flow between the computer and the device.

**Parallel Port** - has 25 holes. This type of port is known as a ***female*** connector. A parallel port connects a printer or tape drive.

**Serial Port -** has either 9 or 25 pins. This type of port is known as a ***male*** connector. A serial port connects a mouse or modem.

**USB Port -** Universal Serial Bus - allows you connect up to 127 devices using on one port.

**MONITOR and VIDEO CARD**

A monitor and video card work together to display text and images on the screen.

**Video card** - a circuit board that plugs into and expansion slot inside the computer. The video card translates instructions from the computer to a form the monitor can understand. Also called the video adaptor, graphics board or graphics card.

**Size of a monitor** - Is measure diagonally across the screen. Common monitor sizes are 14,1 5, 17 and 21 inches.

**Flat Panel -** uses Liquid Crystal Display (LCD), which is the same type of display found in most digital wristwatches.

**Dot Pitch** - The distance between tiny dots on a screen. The dot pitch determines the sharpness of images on the screen. The smaller the dot pitch, the crisper the images. Select a monitor with a dot pitch of 0.28 mm or less.

**Resolution** - is measured by the number of horizontal and vertical pixels. Determines the amount of information a monitor can display.

**Pixel -** the smallest element on a screen. Pixel is short for picture element.