**Computer Components**

# Information Processing Cycle

1. The four components of the information processing cycle are **input, output, processing** and **storage.**
2. **Hardware** is all the parts of the computer you can see and touch.
3. A **peripheral** is a separate part that can be added to a computer system to expand the computer’s input, output, and storage capabilities. (Ex - **Speaker**)

# Output

1. An **output** device is hardware that conveys information to a computer user.
2. List three output devices: **Speaker, Printer,** and **Monitor**. **Input**
3. List three input devices: **Microphone, Mouse**, and **Keyboard**.

# Processing

1. **Processing** is transferring data into information for the computer user.
2. The central processing unit, or **CPU** for short, is the computer’s processing **circuitry**. It is also called the **microprocessor** or **brain of the computer**.
3. The **CPU** is the most important part of the computer because it controls and directs all information a user enters into a computer.
4. The speed of a CPU is measured using **megahertz** or **gigahertz**.
5. The typical size of the CPU in most desktop computers today is **3 GHz**.
6. The **motherboard** is the computer’s main circuit board.

**Binary Code**

1. **Binary code** is the language of computers,
2. A **bit** is the smallest unit of data a computer can process.
3. Data entered into a computer is converted into **electronic** pulses.
4. A **one (1)** is a binary digit representing a short burst of energy (ON).
5. A **zero (0)** is a binary digit representing no energy (OFF).
6. All data a computer processes is turned into a string of **0**s & **1**s.
7. **ASCII** code is used by computer manufactures to encode the alphabet.
8. A **byte** is equal to eight bits. 1,024 bytes is equal to 1 **kilobyte**. 1,024 kilobytes is equal to 1 **megabyte**. 1,024 megabytes is equal to 1 **gigabyte**.

# Storage and Memory

1. A **network server** is one type of storage. It is a central computer in a network that saves programs and work.
2. Examples of magnetic storage devices are **hard** disks (also called the hard drive C://) , **floppy** disks, and magnetic **tape**.
3. Examples of optical storage devices are **CDs** *(often used for data and music files)* and **DVDs** *(often used for video files).*
4. An example of solid state storage device is a **thumb** drive *(also called flash drive or removable drive)*.

*\*Refer to your Storage Devices Chart for further details on storage devices and how much data each device holds.*

1. **Memory** is part of the CPU where data and information are stored.
2. There are two main types of memory chips on the CPU - **RAM** and **ROM**.
3. Memory size is usually measured in **megabytes** or **gigabytes**.
4. Memory speed is usually measured in **megahertz** or **gigahertz**.
5. To increase the speed of your computer, you can often add more **RAM** to a computer by buying additional memory cards.
6. You can not add more **ROM** to a computer because it is permanently installed on the motherboard.
7. **RAM** temporarily holds programs and data while the computer is on, but is empty when the computer is off.
8. **ROM** is nonvolatile (never changing) and is often referred to as permanent memory.