Hardware Basics

College of the Sequoias – COMP 5 Resource

Introduction

Computers have become an essential part of everyday life, from work to entertainment. Let's get to know the main components of a typical computer.

Computer Hardware Components

The following table summarizes the five main hardware components found in a typical computer, along with a description of each component's function.

Component	Description
CPU (Central Processing Unit)	Often called the "brain" of the computer, the CPU is responsible for processing instructions and executing commands from programs or the operating system.
RAM (Random Access Memory)	RAM is a temporary memory that stores data while the computer is in use. The larger the RAM, the faster the computer's performance when multitasking.
Hard Drive / SSD	The computer's main storage that stores the operating system, programs, and files. SSDs (Solid State Drives) are faster and more durable than regular hard drives.
Motherboard	The main circuit board where all computer components are connected. The motherboard regulates communication between hardware.
GPU (Graphics Processing Unit)	Used to process graphics and images. GPUs are essential for graphic design, video editing, and gaming.

Component Details

CPU (Central Processing Unit)

Often called the “brain” of the computer, the CPU is responsible for processing instructions and executing commands from programs or the operating system. The CPU determines how quickly your computer can perform tasks. Modern CPUs have multiple cores, allowing them to handle several processes simultaneously.

RAM (Random Access Memory)

RAM is a temporary memory that stores data while the computer is in use. The larger the RAM, the faster the computer’s performance when multitasking. When you open applications, they are loaded into RAM for quick access. Once the computer is turned off, the data stored in RAM is erased.

Hard Drive / SSD

The hard drive or SSD is the computer’s main storage device that stores the operating system, programs, and files. SSDs (Solid State Drives) are faster and more durable than regular hard drives (HDDs) because they have no moving parts. Many modern computers use SSDs for improved speed and reliability.

Motherboard

The motherboard is the main circuit board where all computer components are connected. It regulates communication between hardware components, including the CPU, RAM, storage drives, and GPU. The motherboard also provides power distribution and connectivity ports for external devices.

GPU (Graphics Processing Unit)

The GPU is used to process graphics and images. GPUs are essential for graphic design, video editing, and gaming. While all computers have some form of graphics processing, dedicated GPUs provide significantly better performance for visually demanding tasks.

Image Alt Text Recommendations

The original infographic contains the following images. If you recreate this document with images, use the suggested alt text below for each. Alt text should be added using Word’s built-in Alt Text feature (right-click the image, select “Edit Alt Text,” and type the description).

Image	Suggested Alt Text
Desktop computer	A white desktop computer tower with a monitor, keyboard, and mouse.
CPU chip	A close-up of a CPU processor chip with the letters CPU printed on it.

Image	Suggested Alt Text
RAM sticks	Two green RAM memory sticks with gold connectors.
SSD drive	A silver and white SSD solid state drive with the letters SSD on the label.
Motherboard	A green computer motherboard circuit board with multiple slots and connectors.
GPU card	A green graphics processing unit card with fans and circuit components.