How to Guide: Computer Basics

A Computer

A Computer is an electronic device that accepts input from a user, performs calculations on the input, and provides and output to the user (Computer Hope). It stores, retrieves, and processes data into useful information.

Types of Personal Computers

Туре	Description	Image
Desktop Computers	Created to sit on a table or desk	
Laptop Computers	Power of desktop computer, but smaller in size and portable, designed to fit on lap	
Notebook Computers	Smaller and lighter than laptops but can be as powerful, designed to fit on lap	
Tablet Computers	Smaller than notebook and it does not have a physical keyboard (uses stylus or finger on touch screen), designed to be held in hand (similar to a slate)	
Smart Phones	Smaller than a tablet but similar, major purpose is for sending and receiving calls	















Hardware and Software

A computer system is the **hardware** and **software** needed to accept the input of data, process the data into usable information, store, retrieve and output the information into a usable format.

Hardware: all the physical parts that make up a computer – those parts of the computer system that you can touch.

Software: the programs that run on the computer. They are instructions that tells the hardware and the computer what to do and how to do it.

	Category	Examples
HARDWARE	Input Devices (used to put data into the computer)	 Keyboard Mouse Microphone Controller Scanner Camera
	Output Devices (used to show or display information)	Monitor/ScreenPrinterSpeaker/HeadphonesProjector
	Storage Devices (where you store and retrieve your information)	 Hard Drive USB Compact Disk (CD) Cloud Storage Dropbox One Drive
	Processing Devices (used to calculate and process raw data into information)	Central Processing Unit (CPU)Memory

	Category	Examples
SOFTWARE	Application Software (instructions or a group of instructions (program) that help users perform specific tasks)	 Word Processer used for typing letters, resumes, flyers, essays, reports, etc. Spreadsheet used for calculating figures & manipulating data Database used for maintaining large datasets and creating forms/applications Publishing used for creating brochures, greeting cards, newsletters, etc. Presentation used for representing content in a visual way
	System Software (interface between the hardware and the application software - i.e., the middleman, communicating with both) Also called Operating System	 Computer Operating System: Microsoft Windows, Google Chrome, and MacOS Mobile device Operating System: Apple iOS and Android OS
	Utility Software (instructions within the system software that keeps the computer running smoothly	 anti-virus software system cleanup software file backup software defragmentation software file compression software

Things to Consider When Purchasing a Computer

Knowing as much as you can about what factors to look for when purchasing a computer while also keeping in mind general consumer education practices will help you in making a more informed decision. And by making a more informed decision, you are more likely to be happier with your decision. Although there are many factors to consider when purchasing a computer, Knowledge of the following five basic factors will help you to make an informed decision about which computer is best for you.

Your Budget

Knowing what you are comfortable spending impacts the features, type of device, and timeline to purchasing the device.

Purpose

Determine what is your purpose for purchasing a computer, its major use, and your needs or wants relative to having a computer.

Processing Power

Determine what level of processing power you will need – greater the speed (GHz), the higher the price and the greater number of cores (processing units), the higher the efficiency and price

RAM/Temporary Storage

Spage/Memory

Determine what size RAM (Random Access Memory) will you need – larger the size of RAM, the higher the price and the more multitasking or gaming, the more RAM needed

Warranties and Returns

Be informed by asking about the warranties and return polices before you purchase – protection against defects & malfunctions

This project was funded by USDA NIFA award # 2022-68006-36496. The material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

December 1, 2023