

Software Basics

By Lorrie Jackson

WHY A TECHTORIAL?

What will I learn today?

You will learn about the main categories of software and explore which software programs you'll probably want to use at school and at home.

What hardware and/or software does the techtorial apply to?

The techtorial applies to every computer --PC or Mac -- that uses software.

Which National Educational Technology Standards for Teachers does the techtorial address?

Learning about the major types of software will prepare teachers to better meet all the NETS.

The International Society for Technology in Education (ISTE) has developed a set of National Educational Technology Standards for Teachers. Standards or Performance Indicators are included for each techtorial to help teachers and administrators improve technology proficiency. For a complete description of the standards indicated, go to [NETS for Teachers](#).

WHAT'S THE DIFFERENCE BETWEEN HARDWARE AND SOFTWARE?

Hardware is the nuts and bolts of a computer; the parts you can touch.

Software is the programs that contain the instructions that tell a computer what to do.

Hardware without software is like a lamp without electricity; all the parts are there, but nothing's working!

Every computer, therefore, needs software. That software can be obtained in one of three ways. It can be

- pre-installed on the computer.

- purchased on a CD.
- downloaded from the Internet.

Not every computer needs the same software, of course. The software *you* need depends on what you want your computer to do. Understanding the different kinds of software will help you

- know what different software programs offer.
- choose the right program for a given task.
- become a smarter software consumer.

SYSTEMS SOFTWARE

Systems software is the software the computer needs to do its work! Systems software includes the:

- **Disk Operating System:** The DOS is the "brain" of the computer; the software that operates the hardware and all the other software. Most PCs use the Windows operating system (OS). Most Macs use the Mac OS. Most teachers won't need to know much about systems software! If it's working correctly, you won't even know it's there!
- **Utilities:** These smaller software programs improve the computer's performance and allow the user to "tweak" files and programs in various ways. ScanDisk, which cleans up files on a computer, and Disk Defrag, which more efficiently organizes files on the hard drive, are examples of utility programs.
- **Languages:** Various computer languages -- such as LOGO, HTML, and C++ -- allow users to create their own software programs.

APPLICATION SOFTWARE

Application software is the software you choose for the work you want your computer to do. Application software falls into the following categories:

- **Productivity Software** includes word-processing programs -- such as Word and Work Perfect -- that allow users to type letters, resumes, reports, and more; spreadsheet programs -- such as Lotus and Excel -- that manipulate numbers and

other data; database programs -- such as Access and FileMaker Pro -- that organize information, including addresses, student demographic data, and so on; and presentation programs -- such as HyperStudio and PowerPoint -- that allow users to make slide shows or other video displays.

Note: A group of several productivity programs packaged and sold together -- such as Microsoft Office or Apple Works -- is called integrated software, or a software suite.

- **Multimedia Software** allows users to create and manipulate media files. Multimedia software includes graphics programs -- such as Photoshop and Corel -- that enable users to input, manipulate, use, and output photos and drawings; publishing programs -- such as PageMaker and Microsoft Publisher -- that are used to create brochures, newsletters, and other "desktop publishing" materials; and Web design programs -- such as Flash, FrontPage, and Dream Weaver -- that are used to create Web pages.
- **Personal Preference Software** includes communication software -- such as Internet Explorer, Netscape Navigator, AOL, and Outlook Express -- that provide the connections necessary for e-mail and Internet access; educational and reference software -- such as Reader Rabbit, Encyclopedia Britannica, and many, many more -- that provide information and teach and test skills; and entertainment software -- too numerous to mention -- that are simply fun to use.

SOFTWARE FOR SCHOOL AND HOME

The kinds of application software you will want available at school includes productivity software -- especially word processing and spreadsheet programs; communication software -- for e-mailing students and parents and for utilizing online resources; and educational software -- to help improve students' basic skills and to extend learning beyond the basic lesson.

At home, you'll want available the same software you have at school *plus* entertainment software -- for stress-relief!

TELL ME MORE!

To learn more about the kinds of software available to you, explore [Computer Hope](#), which provides excellent background on this and other technical topics, and [EvaluTech](#), which offers reviews of 7,000 software titles for K-12 educators.