An Overview of Basic Computer Literacy Skills

Basic Computer Skills

In order to properly use a computer or computing device it is necessary to have a basic understanding of what a basic computer is and how it operates. All computers have two things in common, **hardware** and **software**.

- **Hardware** is what the computer is physically made up of; which includes the monitor, keyboard and mouse, and all of its internal components which allows it to store, receive, and process information and data.
  - The **central processing unit** (CPU), or processor, contains logic circuitry and performs the instructions of a computer's programs. It is the "brain" of the computer.
  - **Read-only memory** (ROM) is the memory that comes with your computer that is pre-written to hold the instructions for booting-up the computer. Information can be read from ROM, but not written back to it. ROM will retain data when the computer is powered off. It is known as non-volatile memory.
  - **Random access memory** (RAM) is the memory available for the operating system, programs and processes to use when the computer is running. RAM can be read from, and written to, for processing information and instructions. Data in RAM is not permanently written and therefore known as volatile memory. When you power off your computer the data stored in RAM is deleted.
- **Software** is made up of informational data and code that acts as a set of instructions informing the hardware what actions it is to perform or initiate. (ie. Software applications: The computer's operating system, *Microsoft Word* (word processing), *Excel* (spreadsheets and data calculation), Web browsers: *Internet Explorer*, *Mozilla Firefox*, *Google Chrome*, and *Apple Safari*, Search engines: *Google*, *Bing*, *Yahoo*)

There are several different kinds of computers. The most common computers are desktop computers, laptop computers, tablet or touchscreen computers, and servers which allow computers to network and connect with each other via the local area networks (LAN) or the Internet. Other examples of computers may also include smart phones, gaming counsels, kiosks and computers that may also be found in home appliances such as TVs, refrigerators, and vehicles which make use of software applications or apps to connect and communicate with Internet service.

What is Computer Literacy?

Computer literacy as defined by Webopedia is: The level of expertise and familiarity someone has with computers. Computer literacy generally refers to the ability to use applications rather than to program.

In order to become more familiar with computers, it only takes looking to your nearest local library, or community college, to find introductory continuing education classes and informational sessions for learning about computers. Most libraries offer open and scheduled access to computers for application, word processing, and Internet access or Web browsing. Many libraries are now providing computer access areas, or maker spaces, for creative professional purposes.

Once you have access to a computer, first familiarize yourself with the following physical features of the computer in **Table 1** and where they are located on the computer. Once familiar with these log in to the computer and begin to familiarize yourself with using the mouse and keyboard by using a word processing application, like Microsoft Word.

Power Button	Monitor	Keyboard	Mouse/Track Pad	Power Supply	Computer Ports
Symbol for the On/Off button starts or powers up and off the computer.	The display screen used to view informational data or applications.	The keyboard is used for typing and interacting with the computer	The mouse is used for clicking, selecting, moving the cursor.	The power connection is used to supply the computer with electrical power.	Universal symbol for computer accessory port (printers, USB drives, etc.)

Table 1 Parts of a computer to be familiar with to become computer literate.

Mouse Skills

To become literate on the general use of a computer, it is necessary to familiarize yourself with the use of a computer mouse and the following actions performed with it.

Using the Computer Mouse

The computer mouse (Figure 1) is used for performing actions, such as opening or closing applications, navigating the computer or Web pages via the Internet, and moving items around on a computer.

Actions commonly performed with the mouse include **pointing** and **clicking** using either the left or right click buttons, **scrolling** an application or browser window, by moving the **scroll wheel** up and down. Objects and text can be moved by **selecting** them or placing a **cursor** before, or after type, and **dragging** (depressing the left mouse button, holding it down while moving the cursor) across the type to highlight text or selecting objects and dragging and dropping them in place. The mouse may also be used to select items such as radio buttons on forms.
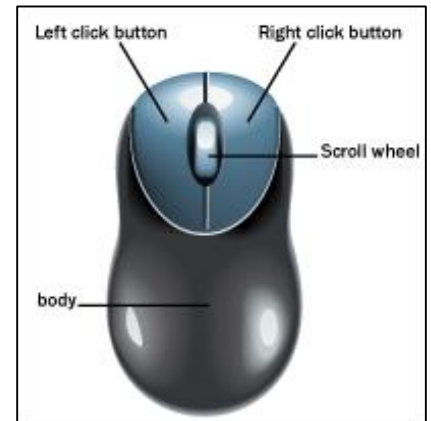

Figure 1: Example of a computer mouse with its individual parts labeled

Brief Overview of Common Mouse Actions

Action	Cursors Associated with Action	Movement: Handling of Mouse
Pointing and Clicking (Single and double clicking)		
Scrolling (Up, down, left, right)		
Selecting, dragging, and highlighting		

Table 2 Common actions and cursors associated with the computer mouse

For more information and practice using a mouse see GCFLearnFree.org for a Mouse Tutorial.

Keyboard Skills

The keyboard is used to type information into the computer or **input** information. A typical personal computer (PC) keyboard has the keys organized into four separate areas: the **Function** keys, the **Typewriter** keys, **Cursor Control** keys, and the **Numeric** keypad. The most common keyboard layout is the **QWERTY** keyboard seen below in **Figure 2**. It is named for the first 6 letters of the top row of the letter keys.

Figure 2: Common PC keyboard with QWERTY keyboard organization

Function Keys

The **Function** keys are generally assigned to a special task or function. Below is an example of common function keys and their associated tasks. These keys may also be used in combination with the Shift, ALT, and Control key (CTRL) PC or the Command key (⌘) on Apple/Macintosh.

- **F1**: Get Help or visit Microsoft Office Online
- **F5**: Find and replace
- **F7**: Choose the Spelling command (Review tab)
- **F8**: Usually used with LCD projector/dual monitor device.
- **F10**: Show Key Tips
- **F12**: Choose the Save As command (Microsoft Office Button)

Typewriter Keys

The **Typewriter** keys include the numbers, alphanumeric keys (letters and numbers), and punctuation keys, as well as the **space bar** and ↑**SHIFT** key. The shift key is used for capital letters and accessing the common symbols found above the number keys. The **Caps Lock** key is used for a series of capital letters. The **Enter** key is used to begin a new paragraph in a word processing application and may also be used to choose "OK" in a dialogue box, or "submit" in a form.

Cursor Control/Navigation Keys

The **Cursor Control** keys, also known as the **Navigation** keys, are used to move the text cursor in the direction of the arrows. These keys also include the **Home**, **End**, **Page Up**/**Page Down** keys and may used to move the cursor around the page or to the beginning (Home) or end of a line of text. These keys may also be used in combination with the SHIFT or CTRL keys to select whole words, lines or paragraphs of text or code quickly.

Numeric Keypad

The **Numeric Keypad** functions much like the keys of a calculator to perform numeric and mathematical entry of data. To use the numeric keypad it is usually necessary to depress the **Num Lock** key, which may also have an indicator light on the Num Lock key or above the numeric keypad. Some keyboards also have a calculator shortcut key as well.

Additional Keyboard Keys

What about the rest of the keys? There are a number of other keys that include the **Combination** keys, **Locking** keys, **Mistake**/**Remove** Keys and the **Help** keys.

Combination Keys

The **Combination**, are modifier keys which include the **CTRL** (Control) **SHIFT**, and **ALT** keys.

- The **CTRL** (Control) key is used in "combination" with the typewriter or other command keys to perform special operations or command actions. (ie. CTRL+Z: Undo, CTRL+F10: Maximize application window)
- The **SHIFT** key is used to type capital letters or to activate the punctuation and other symbols found above the number keys.
- The **ALT** key is usually found on either side of the spacebar and typically used in "combination" with the command keys for alternate functions or actions (ie. CTRL+ALT+Delete: Windows Task Manager). The **ALT** key may also be used in combination with the **Tab** key to toggle, or move through currently opened windows or applications.

Locking Keys

The **Locking** keys are used to lock or change how the keyboard responds to keystrokes. The Locking keys include the **Caps Lock**, **Num Lock**, and **Scroll Lock** keys. These keys often have an indicator light associated to them. (See keyboard in Figure 2 above). These keys are typically clicked once to activate and once more to inactivate.

- The **Caps Lock** key is used type successive capital letters, whereas the Shift key is used for a single capital letter.
- The **Num Lock** key is used to activate the numeric keyboard found on the right side of the keyboard
- The **Scroll Lock** key is intended to temporarily stop the scrolling of text or halt the operation of a program. This key is somewhat antiquated today, as there are not many applications that make use of it. Although, in the *Microsoft Excel* application when the Scroll Lock key is enabled, the arrow keys will directionally scroll the screen without changing the selected cell within a worksheet.

Mistake/Remove Keys

The **Mistake** or **Remove** keys include the **Backspace** and **Delete** keys are typically used to remove text or content for an application. The **Backspace** key removes, or deletes, text to the left of the cursor and the **Delete** key removes text from the right of the cursor. When text is highlighted, or additional content or objects selected, the Delete key will remove everything altogether, or all at one time instantaneously.
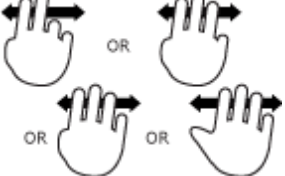
Help Keys

The Help keys often include the **Windows** key on PCs, **Print Screen**, **Esc** or **Escape** key, and the **Menu** key.

- The **Windows** key is a shortcut key to access the Start menu in the Windows operating system. In Windows 8 it can be used to toggle back and forth between the Windows 8 start screen (Metro) interface and the standard desktop view.
- The **Print Screen** key may be used to capture the entire monitor screen, or used in combination with the ALT key to capture a currently selected window.
- The **Esc** key is often used to exit or "escape" from an application window or dialog box. This key can be thought of as a shortcut to… Abort, Cancel, Exit, or Quit. It may also be used as a STOP key in Web browsers.
- The **Menu** key is used to launch a context menu with the keyboard instead of clicking the right mouse button.

Mobile Device and Tablet Skills

Mobile devices are any small electronic computing device that are designed to be portable, handheld and used as a means of communication, learning interaction, and reading. Many mobile devices today are extremely versatile and allow you to do the same kind of computing actions that are possible with a desktop or laptop computer. These devices include tablet computers, e-readers, and smartphones.

Brief Overview of Common Mobile Device and Tablet Gestures

Basic Action	Gesture	Description, Example
Single Tap, Double Tap		Briefly touch surface with fingertip, Rapidly touch surface twice with fingertip Single tap is used to select items Double tap is used to open items
Drag, Scroll, Scrub (Video)		Move fingertip over surface without using contact, Move fingertip over scrollbar without losing contact, Move fingertip over scrollbar without losing contact
Navigation Action:		
Adjust view (zoom in)		Touch surface with two fingers and move them apart, Rapidly touch surface twice with fingertip
Adjust view (zoom out)		Touch surface with two fingers and move them together
Scroll, Flick (fast)		Quickly brush surface with fingertip in the direction you want to scroll
Move, Scroll, and Pan (Pan through apps, scroll through pictures, slides, pages, etc.)		Move fingers and palm of one hand over surface without losing contact

Learning More about Tablets and Mobile Devices

Every device and operating system has its nuances and will no doubt change over time and with technological advances as well as additional human user and interface testing. Below are a list of resources that will hopefully provide some insight into current devices and systems. Be sure to check your local community libraries to see what devices and opportunities they have for learning about and using mobile devices, tablets and other computer technology.

Resources

- Free Devices Tutorials at GCFLearnFree: http://www.gcflearnfree.org/devices
- Android OS:
  - Phones: http://www.android.com/phones/ , Tablets: http://www.android.com/tablets/
- iOS (Apple, Macintosh):
  - iPhone: https://www.apple.com/iphone/ , iPad: https://www.apple.com/ipad/