



## Intro to Computers

This is a very basic guide to your computer and some of the terminology that's commonly used. You don't need to memorise all this – have a quick read through and then refer back to it if you need to.

There are basically two parts to a computer – hardware and software. Hardware is made up of the physical parts of the computer. I quite like the definition of hardware as 'anything you can kick' 😊.

Software is made up of instructions to the computer on what to do, in the form of

- an Operating System eg Windows 7
- and
- the application programs such as Word or Photoshop Elements.

I think it's useful to think of a computer in terms of what happens. There is one of those mind-numbing IT phrases that you can lob into the conversation when it goes quiet called the IPSO model. A computer can basically do four things –

**Input** – receive instructions and data

**Process** – do something with them

**Storage** – store the results somewhere

**Output** – display or print the results

Here's a bit more information on each of them:

**Input** – the computer accepts instructions and data from you using things like the keyboard, the mouse or a graphics tablet. These are the bits of hardware you use to communicate with the computer and its software.

- Click means depress and release the left-hand button on your mouse.
- Double click means do it twice fairly quickly
- Right click, not surprisingly, mean depress and release the right-hand button on your mouse. This usually brings up what is called a context menu – this gives you options that relate to whatever you have clicked

on. So, for instance, if you right click on a piece of text you will get options like setting the font or formatting the text.

- Drag and drop means that you depress the left-hand button of the mouse over something you want to move and you drag it, keeping the left button down until it's where you want it. Then you release the button.

**Process** – the computer then follows the instructions and does something with the data using bits like the processor, sometimes called the CPU (central processing unit) and the memory, where all the calculations go on. There are two types of memory

- ROM (read-only memory) which stores information that the computer needs when it starts up (boots), You won't normally have anything to do with this type of memory.

and

- RAM (random access memory) which is temporary storage. This is where the work happens.

So a typical sequence would be:

Open an existing Word document. This is stored temporarily in RAM while you edit it. When you are finished, the updated document is saved so you have a permanent copy. If you don't save it, anything in RAM when you switch the machine off is lost!

Think of the RAM as being your desk. If you open a lot of programs and documents you can fill your RAM up and you'll get errors. Close files and programs down as you finish with them. The performance of a computer can often be improved by the addition of extra RAM, especially when you are using graphics programs like Elements but take some knowledgeable advice on whether to add more to your machine as there are a number of variables to be considered such as the operating system and hardware you already have.

**Storage** – the results of all that processing are stored as documents, images etc in various places. There will be one or more hard disks in your computer. This is where your operating system and applications are stored ready to use and where your documents and images are stored. The term disk drive is often used – the disk is the physical place where your data are stored and the drive is the mechanism that runs the disk. If you are old enough to remember record players then the disk is the record and the drive is the record player.

There are other forms of storage which can be removed and used on other computers such as CD/DVDs and the brilliant memory sticks, sometimes called thumb drives or flash drives, that plug into a USB port on your computer. See below for information on USB ports.

The term used for putting documents on to a disk is 'writing to the disk' or 'saving your file' and the term for getting documents off a disk is 'reading from the disk' or 'opening a file'.

Think of your storage as a filing cabinet. If you just piled papers into a filing cabinet you would find it difficult to find anything later. So you divide the paperwork into drawers and folders. Likewise with your digital files – store them in logical groups. Older systems used to call these groups directories but now they are usually called folders. So, for instance I might have a two-drawer filing cabinet dedicated to my courses with one drawer for Creative Computing for Textiles and one for Textile Decoration. Within each drawer I might have a folder for Students' Information, one for General Resources and one for Results. Inside the Students' Information section I would have a separate folder for each student. On my hard disk I would have folders and sub-folders mirroring this structure.

- Creative Computing for Textiles
  - o Students Information
    - Student 1
    - Student 2 etc
  - o General Resources
    - Copyright
    - Health & Safety
  - o Results
- Textile Decoration
  - o Students information

I think it's easiest to set up a basic folder structure using Windows Explorer. If you would like any help with this, let me know.

**Output** – the computer displays the results of your work on your monitor and/or prints it out on printers of various sorts.

The two main printers used at home are laser printers and inkjet printers.

- Laser printers use heat to fuse toner powder on to the paper. These are office workhorses and print good, durable documents. The cost per page is usually a lot lower than one printed on an inkjet printer. The quality of images printed on a lot of lasers leaves something to be desired and they will certainly object if you want to start printing on unusual surfaces!
- Inkjet printers, as the name suggests, squirt tiny droplets of ink on to the paper to create the printed document. Even cheap inkjet printers can give really good photographic images and they can be VERY cheap. The ink, however, is not.

### **Some common terms:**

**Default** – these are the settings that will be used if you don't change anything. A common phrase is 'use the defaults' and simply means don't change any of the available settings.

**USB ports** – these are multi-purpose sockets on your computer that can be used to connect a whole variety of



different devices to your computer from a mouse, to a memory stick or a printer

**Printer driver** – this is a bit of software that handles the communications between your computer and your printer. If you have more than one printer attached to your computer you will have a printer driver for each one. The driver has to be installed for each printer before you can use it. You'll see these in action in a later tutorial.

### Keyboard shortcuts

It will really speed things up for you and will reduce wear and tear on your 'mouse' wrist if you learn a few keyboard shortcuts. For instance you could take your hand off the keyboard, put it on the mouse, left click on the File menu then click on Save, to save a file, or you could hold the control key (Ctrl) down and press the 's' key. Here are a few that I use a lot.

The table below applies to any Windows program

Ctrl-O	Open a file
Ctrl-S	Save a file
Ctrl-P	Print a file
Ctrl-X	Cut
Ctrl-C	Copy
Ctrl-V	Paste
Ctrl-Z	Undo the last thing you did
Ctrl-Y	Redo the last thing

These work in Elements but also seem to work in other Adobe programs. You will use these a LOT! You might not know what a selection is yet but you will get rid of them on a regular basis.

Ctrl—(hold the ctrl key down and press the 'minus' key)	Zoom in to the image ie make it bigger
Ctrl+(hold the ctrl key down and press the 'plus' key)	Zoom out of the image ie make it smaller
Ctrl-d	Get rid of a selection

**Scrolling** – this is moving up or down or from side to side on a document or web page by the means of sliders (scroll bars). For instance if an image is too big for it all to be displayed in Elements, Windows automatically adds scroll bars to the right or bottom of the image. You hold the left button of the mouse down over the relevant scroll bar, drag it to where you want it and then let it go.