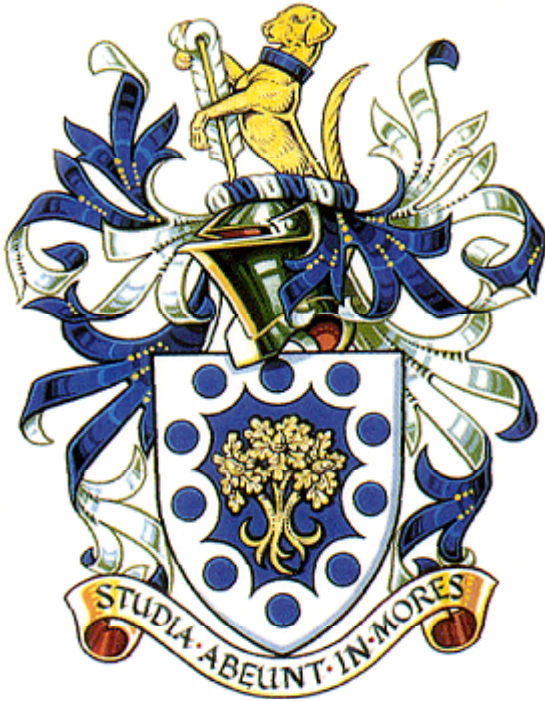


Hurtwood
House



Buying a Notepad

Version 1.5

What are the benefits of having a notebook computer?

Ownership of a notebook enables students to raise their Information Communications Technology (ICT) skills and ensure a better preparation for later life. We wish students regularly to carry out tasks such as:

- researching using the Internet and multimedia CD-ROMs;
- compiling reports using a word-processor possibly including charts produced through a spreadsheet, scanned images, pictures taken with a digital camera, sound and video clips recorded in our studios etc.;
- preparing presentations on particular topics and using multimedia projectors to deliver presentations to groups, etc.
- collecting an electronic worksheet from a teacher or Sharepoint, completing it and returning it through e-mail;
- at home during holidays and weekends using the systems they are familiar with to continue with their assignments.
- using computers in lessons to make relevant notes, collect electronic reviews, tests, reports, worksheets etc

Can I buy my own notebook computer and use it on the school network?

Please note that students are not allowed to plug computers directly into the telephone system or wiring infrastructure, but can attach to the school's wireless network. Most classrooms and houses have wireless networking access points to enable students to attach their PC notebooks to the network. Students in possession of a notebook are at an advantage in such areas. They can use shared school resources such as:

- fast & free Internet access via the school network (subject to a Fair Usage restriction);
- Electronic Mail;
- a wide variety of CD-ROMs and other resources from our school Intranet;
- colour laser printers;
- updated virus checking software;
- the facility to make regular backups of data files.

To protect computers from one another, the wireless connection uses an encryption key which is changed regularly every term, and immediately if we are notified of a particularly nasty virus. Before laptops are given the key one of our IT team will remove file sharing applications, install the latest security patches and our licensed anti-virus program. Since there is such a wide variety of manufacturers, specifications and settings we cannot promise to make all PC laptop models work with our network. We will use reasonable efforts to configure notebooks to work with our network where they meet the minimum recommended specification (below); are licensed for all the software installed (you must sign a declaration to this effect); and the school's antivirus software is installed and active at all times. **Please note: the school does not support Apple Mac computers, although in practice most can be configured to have wireless connection for Internet access.**

What happens if something goes wrong with my notebook?

If it's a simple problem, such as key sticking or a virus infection then our ICT technician will deal with it straight away. If there's a more serious problem, our technician will not attempt any repair which might invalidate the notebook warranty. You should make sure, therefore, that when purchasing your notebook you take out a good quality service agreement. All work done by our support staff is done at the user's own risk.

What about insurance?

You should make sure that the machine is covered against theft and accidental damage for the duration of your time at the school. Damage is rarely covered wherever such damage was intentional or was the result of abuse or experimentation or is normal 'wear and tear' or aesthetic damage (not affecting the normal working performance of the machine). Thieves regard notebook computers as very desirable, so it is essential that very good care is taken of the computer at all times, especially when it is not in a place that has restricted access, such as an office building, home, or school. Note that under most policies the computer will not be covered if left in a car overnight, or wherever the insurers consider that all necessary steps were not taken to protect and safeguard it, such as if the computer is left on a bus or in a public place.

What specification do I need to buy?

The notebook computer you need depends on whether you intend to use it for basic personal productivity using, for example MS Office, or you intend using it for more advanced art and media courses where you might wish to install Adobe Creative Suite. A simple Buyers Guide is available below to help you decide.

Can you recommend a supplier?

A list of reputable suppliers and contacts can be found on the National Desktop Notebook Agreement website by searching for "NDNA Notebook". These suppliers offer extended warranty and a technical support system tried and tested by UK Universities and, although the school is not part of the NDNA, a call to the supplier will usually elicit a good response. (*Toshiba (via Getech and XMA), Ergo, Dell, Samsung (via Getech and Stone) and HP (via DTP and RM).*)

Buying a Notebook

A notebook computer is one of the trendiest gadgets. Just walk into a public place, set the notebook on your knee and start working on it. People will try hard not to look impressed, but it won't work! Of course, few people actually buy notebooks to make themselves look good. Buying a notebook usually means a significant financial investment, and so sound business motives normally drive the purchase of one.

But why are notebooks more expensive than comparable desktops? After all, the components are smaller aren't they? So you'd expect they'd be cheaper. In the world of technology, the opposite is true. When you consider that not too many decades ago computers filled whole rooms, you realise that the challenge for technology developers is to make computer parts that are smaller, not larger. This is why the truly tiny computer components that make up notebooks are expensive.

Besides cost, notebooks are more prone to damage than a desktop computer. This is not hard to understand considering the permanently mobile state that they are usually in. How many times have you lost an armful of articles because you thought you could make it to the down the stairs/across the room with the lot? The most common way that notebooks get damaged is by being dropped.

So, why buy a notebook?

Despite their cost and somewhat fragile nature, notebooks are very popular.

They are vital tools for business people that travel a lot and need to complete work on a computer en route. More and more often travellers are using notebooks to connect to the Internet and download email. They can also be used to connect the traveller to the computer network of the company he or she works for.

- Notebooks are the main type of computer used by people whose work takes them outdoors, but who still need to enter information into a computer. This includes professions like soil scientists and geologists, agricultural experts and farmers, vets, the police, the military and conservation workers. The information they enter can be transferred to a desktop computer system later or electronically to a destination - either via email or a network connection.
- Notebooks are sometimes used by teachers and students in lectures and tutorials instead of paper-based recording. Journalists and sales consultants on the road who need access to information are other examples. The use of notebook computers often means an end to lugging large manuals, catalogues and other paper-based information around.
- People also often buy notebooks for purely personal reasons. For example, some home users prefer notebooks because they take up less space than a desktop computer.

Not all notebooks are equal. In fact, there are three main types of notebook on the market:

The "Value" notebook

The value notebook is usually the best seller of a brand's range. This is because most notebook buyers eventually have to confront their budgets. Because notebooks are significantly more expensive than desktop computers with similar specifications, no matter what exciting new technologies might appeal, value notebooks are popular. They combine the most cost-effective notebook components to produce a notebook that is probably fairly solid, with average but adequate components and nothing fancy to get excited about. They are suitable for running personal productivity software, such as MS Office, with limited graphics use such as clipart, digital photographs, and music files (MP3s).

The "Power" notebook

Also known as "high-end notebooks," these do-it-all notebooks cost the most and do the most. However, before you pay extra for a high-end notebook, ask yourself if you will really benefit from all its added extras, or whether they just look good on paper. Remember that while high-end notebooks perform the best, they also devalue the most, as technology quickly becomes outdated. These notebooks usually run on the fastest mobile processor available at the time, offer a range of drives including DVD, have big hard drives and usually room for two batteries. They should offer a few advanced technologies like wireless communications, and Bluetooth/infrared ports (which means your notebook can communicate with other peripherals like printers and phones without cables.) Power notebooks also tend to offer advanced power saving and security features, a large amount of computer memory, and a superior screen. You will want to consider these notebooks if you are taking advanced media subjects including art, print and web design courses.

The "Light" notebook, Netbook or iPad

This notebook type is usually more expensive than the correspondingly specified "value" or "power" notebook because extra effort has gone into reducing its weight. As a result, some of its components may be external to the main unit. For example, it may have an attachable DVD drive, rather than house the drive in the main unit. Weight is the primary consideration because, if you are always on the go and never at the same desk, a standard notebook gets very heavy if you have to carry it for long periods. If you choose a light notebook a network connection is especially important for saving, printing and transferring your work. There are now "Netbooks" which are smaller, have much less processing power, but provide internet access, often bundled with a mobile phone type of contract. An attractive but even more limited device is the iPad; this struggles to maintain connectivity to the school network so it is not recommended; if you consider it a "must-have", please buy the version with a 3G access contract if you wish to have internet connectivity.

Notebook Components

If you think you know the notebook type you are looking for, your next set of decision-making will revolve around making component choices between notebook brands. For many, this is a very confusing process. To make it easier, we've broken down the main notebook components below and discuss what you should consider and where applicable, how each component differs from its desktop equivalent:

1. Notebook processor

These differ from a desktop processor in their size. Often as fast as a desktop they are specially designed to be physically smaller while producing the same performance as a desktop equivalent. The higher the megahertz number the better the performance. And you can also get notebook Celeron or Atom/Nano processors, which like the desktop variety, perform more slowly than a Pentium processor but help reduce the overall cost of producing the notebook.



2. Keyboard

It's a mistake to assume that you will be able to use a notebook keyboard as you would a desktop keyboard. Notebook keyboards are smaller, meaning that your fingers are not positioned as naturally as they would be on a larger keyboard. Over long typing times, this leads to cramps and pains in the fingers and joints, which is why some notebook users connect desktop keyboards to their notebooks whenever they have the space to use one. Most notebooks have a port in the back to allow a desktop keyboard to be attached to it. Very mobile notebook users will need to use the notebook keyboard, and so look for keyboards with light, springy keys and an overall area that is as large as possible. This does differ between brands, so check the product specification list for keyboard dimensions.

3. Navigation device

It sounds nautical, but the navigation device on a notebook is simply the device that replaces a desktop computer's mouse. In other words, it's the device that controls the movement of the cursor. In notebooks, there are different types of navigational device. The most common is probably the touchpad. This is just a touch-sensitive pad that moves the cursor as you move your finger across the pad. More expensive devices (iPads and Tablet PCs) may have a touch screen. The best type of navigation device for you will often be a matter of personal preference. Try the options and consider which one you'd prefer. You can also connect a desktop mouse to your notebook when it's possible.

4. Display

The display or screen area of a notebook has traditionally been an important selling point. This is because poor screen quality together with a smaller screen easily tires the eyes (and often the head!) of notebook users. A clear screen, as big as possible within the size restrictions imposed by the notebook is what you are looking for. Notebook display sizes range from 13.3-inches to about 17 inches. This is a diagonal measure across the screen.

The types of resolutions available for any screen are important considerations.

Resolution is a measure of the clarity or detail that you see on your notebook screen, so the higher the resolution, the better the screen. VGA screens offer the lowest resolutions (640x480 pixels – now only found on mobile devices), followed by SVGA (800x600 pixels) and through XGA (1024x768 pixels) to sXGA (1280x1024 pixels) or even higher.

5. Hard disk drive

Like a desktop computer, the hard disk drive is the main storage area for the files you create on your notebook. Generally, the bigger the hard drive's capacity is the better. However, you may be able to economise on your overall notebook cost if you opt for a smaller hard drive. This is not advisable if you plan to store graphics (picture) files or you plan to download and save a lot of information from the Internet.

It also pays to remember that if you want to run a number of large software programs on your notebook (for example an office suite, encyclopedias, or games) then you will need a bigger drive.

Notebook hard drives range in size from twenty to several hundred gigabytes. A twenty-gigabyte drive is a small hard drive by today's standards and you would be better to invest in a hard drive of forty gigabytes or more.

Some notebooks have an extra bay where you can add a second hard drive for extra storage or increased performance if you want to. And unlike desktop computers, notebook hard drives are normally easy to remove from the main unit for repair or replacement.



6. Main memory (RAM)

Random Access Memory (RAM) is a temporary memory device that stores information about to be processed. The more RAM you have (measured in megabytes) the faster the information is processed. A good amount of RAM also means that your notebook can run several programs at once without "freezing" or "crashing." In fact, these common computer problems are often the result of not enough system RAM, whether it is for a notebook or desktop and as operating systems get more powerful they make greater demands on memory.



The reason that some buyers skimp on the amount of RAM in a notebook is that extra Ram results in noticeable price increase in the price of the notebook. Our advice is to make sure you have a good amount of RAM for the programs you want to run. 512 megabytes of RAM will be fine for basic word processing and the like, but for graphics or games you should buy a notebook that has 2 Gbyte of RAM or more. Also ensure that your notebook has room for extra RAM to be added should you need it later.

7. Batteries

As you might suspect, notebook computers don't run on air! To keep them working away from a power outlet, you need batteries. In general, you can expect an average of two to three hours of use from your notebook battery. However, this varies widely depending on the work you are doing on your notebook and whether or not you are using the power saving features present in nearly all notebooks.

For example, notebooks that have a mobile Pentium M processor have a low-power mode that comes on automatically whenever the notebook is on but idle. Some notebooks have room to install two batteries, which doubles the time you have to work before you will need to recharge the batteries. An Atom or Centrino notebook has even more sophisticated low power modes.

Look carefully at the type of battery a notebook has and the average number of hours it provides. If you won't be using your notebook batteries often because you will have regular access to mains power, then battery capacity becomes less important.

8. Extra storage and USB ports

Most notebooks come with a DVD ROM drive which you may need to load and run software programs and perhaps to store information. A CD-Rewriteable drive lets you store your own information onto CD ROM as a back up to projects or to create presentations. A DVD ROM drive can run both DVD and CD ROMs.

Additional hardware (printers, cameras, etc.) can also be added via Universal Serial Bus ports (USB). You can also use a second standard hard drive for extra notebook storage or Memory Stick drives that plug into the USB port. These hold between 16Gb and 320Gb of data and are sold at cost by the bookroom.

9. Networking and Wireless Networking

Most notebooks will have an on-board Local Area Network (LAN) port for attaching to a computer network using a wire. Many now offer wireless technology that means that the notebook can communicate with other devices without needing to connect by cable at all. The IEEE 802.11b ("Wi-Fi") standard is a full networking product which permits high speed networking over medium range distances (about 100m). This standard is built into all notebooks with the Centrino trademark. It is this standard we support on our school networks. Please remember that the built-in Wi-Fi antenna may be very small and whilst most areas of the school and boarding houses have WiFi we cannot promise universal coverage.

Second-hand buying

If you get the option to buy a notebook second-hand, don't do it. You never know the damage that the notebook has sustained. It may have been dropped or been spilt on, or it may have a faulty hard drive, navigation device or other component problems. Obtaining new parts for notebooks can be both expensive and difficult due to the fast-moving nature of mobile technology. A second-hand notebook will rarely still be under warranty.

Warranty

Most notebook warranties are only for one year, although larger brands and those on the NDNA list will allow you to extend those to two or three years for an extra charge. Note that when it comes to the warranty on a new notebook, you are only covered for faulty parts - not accidental damage caused by dropping, knocking or spilling things on your notebook. For this reason, it is very important that you ensure your notebook is covered within your general house contents or business insurance. Before you buy your notebook, read the fine print of the warranty very carefully: Where will you need to return your notebook to if it needs repair? How long will this take? Will you be given a spare notebook or hard drive while your device undergoes repair? What parts are not included in the warranty? If you use the NDNA suppliers referred to above you should very seriously consider taking out the insurance and extended warranty offered by them.

Glossary of Terms

Navigation device	The cursor control device in a notebook, that replaces the desktop's mouse
Power saving	Features built to conserve battery power when it is on, but not in use.
CD-RW drive	A drive that lets the notebook user save information onto a CD ROM
CD ROM drive	A drive that runs CD ROM disks
DVD ROM drive	A drive that runs DVD ROM disk, 10 times the amount of data a CD-ROM holds.
USB	A standard connection socket for add-on devices
XGA	A display standard that offers resolutions of 1024 x 768 pixels

Recommended Minimum Specifications (September 2008)

	Value Notebook Most Other Subjects	Power Notebook Media Courses
Processor	Celeron	Pentium IV (M)
RAM (MB)	512 XP (1Gb Vista)	1Gb XP (2Gb Windows7)
Screen (inches)	13.3 XGA	15+ XGA
Hard disk (GB)	20+	40+
Storage	USB, DVD ROM	USB, DVD writer,
Battery	NiMH or LiIon	LiIon
Network	Ethernet LAN port, Wireless	Ethernet LAN port Wireless
USB	At least 2	At least 3
Operating System	Windows XP/7	Windows XP/7
Battery Life	Up to 3 hours	3 hours+