

Schools ICT's simple guide to choosing the right broadband

We know that choosing the right broadband option for your schools is important.

At schools ICT we want North Yorkshire's schools to choose the best and safest broadband options available and be confident in their choice. It is not just about what is right for today but what's right for tomorrow and next year. All suppliers, including Schools ICT ask schools to sign up for a period of time so it is vitally important to get it right from the start.

By spending a little time working out how your school uses the internet it will be easier to find the best broadband service that strikes a balance between cost, access and speed and is future-proof.

The first thing to understand is that access to the internet is basically achieved through three elements – a physical connection to a network, the software to enable browsing and messages to be sent, and, most importantly, security for safe surfing.

Through partnerships, Schools ICT are able to offer the following options:

- ADSL (Bundles)
- Schools ISP & Schools ISP *light*
- Direct 10 copper
- Direct 100 or 200 Fibre

Here is our simple guide to what you need to know to and Schools ICT will help you pick the right product.

Getting connected

It all depends on

1. where am I?
2. what do I need it to do?
3. can I work confidently and safely?

Where am I?

There are basically two types of broadband – those delivered through the phone line and those delivered through a cable.

The fastest connection is through a fibre-optic cable and NYCC has joined with commercial companies to develop an ultra-high-speed internet network called North Yorkshire Network or NYnet. Currently about 75% of schools can be connected via fibre optic cable, and this is growing as more fibre optic cable is laid. NYnet are aiming to connect 93% of the County by 2016. You have probably seen the green BT boxes with BT Infinity stickers on, popping up over the county. If there is one on your road then the fibre optic cable is in place.

Not all the county is covered by a fibre optic cable yet so this restricts the option for some of the outlying schools. However if you have a telephone then your school can connect to the NYnet network, giving Schools best possible solution in their area. This option is called ADSL or Direct Copper.

What do I need it to do?

The right choice depends on how your school intends to use the internet now and what plans you have for the next few years. Every time you connect to the internet and open a page or messages you are “downloading” information. Every time you send messages or save files you are “uploading” information.

Bandwidth

Thinking about a school day you will have lots of different tasks going on at the same time, it is a very different usage to corporate business and at home. For example one class may be using a tablet device per student to surf the web to find information for a project (Downloading). Another class might be watching a YouTube video (Downloading) and the admin office and teachers might be dealing with emails (uploading -sending and downloading – receiving). If all this is happening at the same time then your broadband service needs to be big enough able to accommodate all the tasks at the same time.

Different products talk about the ratio of download to upload speeds. So for example the simplest connection through and ADSL telephone line achieves top speeds for downloads at about 8Mb, and the top speeds for uploads are usually less than 1Mb. This is why we try and bundle as many of these together as we can to achieve more bandwidth.

BBC guidance is that to watch a HD programme through iPlayer takes up 3.5 Mb per second of download speed. If all the class are watching through one device then this is great, but if pupils are each watching through their own device at their own speed then they will soon use up all the bandwidth causing the programme to judder or stop all together. You will need more bandwidth!

Basic government guidelines suggest that a primary school would be best served by download speeds of about 10MB and secondary of 100 MB or more.

Schools ISP, Direct 10 , Direct 100 and Direct 200 are products that make sure you have the right amount of bandwidth to cover your needs.

Flexible

The products offered by NYnet allow the Schools usage of technology that connects to the internet to grow. You might want Schools ISP light today, but next year, you might need to move to Schools ISP, as you buy more devices. The NYnet network has been built to allow for growth, and be future proof for your school.

Contention

The other factor to consider is who else is sharing your line. The best option is to go for an uncontended option – this means you are not competing for bandwidth with anyone else.

Your home broadband shares bandwidth with other users. So you might find it is very quick during the day but in the evening when several members in each household are all using the internet at the same time as your neighbours, have you noticed how much longer it takes to connect to sites?.

Domestic contracts often say download speeds of “up to”, but unless you are the only one using the network the speeds are generally a lot lower. For a school having to wait for information to download slowly is not an option so look for an uncontended package. The Direct packages and Schools ISP offer uncontended connections.

Email and Browsing packages

The Microsoft Office suite comes with email and web browsing packages - Outlook and Internet Explorer. Office 365 email support is included in all our broadband packages, along with website hosting support and management.

Can I work confidently and safely?

Schools have a responsibility to protect their students from harm whilst using the internet and for keeping all their data and records safe from unauthorised access. A secure broadband service is essential for this.

Schools ICT supplies Smoothwall filtering boxes, either as part of the Broadband package or as a separate item.

If you are using a commercial supplier check to make sure your filtering software meets national standards as outlined in the Governments Guideline “PAS 74 - Access control systems for the protection of children online”.

Broadband options from Schools ICT

We hope the above information will help you make the best choice for your school. If you would like further information or an informal chat about which options is most suitable for your school please contact the Schools ICT Helpdesk on 01609 536086 (option 1)

Summary of packages:

- **ADSL:** basic access to the intranet over a phone line for schools where super-fast broadband is on its way
- **Schools ISP:** highly resilient internet connection offering guaranteed uncontended bandwidth, which can flex to fully meet requirements. This service also includes additional components, including internet filtering via the Smoothwall UTM device.
- **Schools ISP Light:** highly resilient contended internet connection offering download speeds of up to 80mb and upload speeds of up to 20mb. This service also includes additional components, including internet filtering via the Smoothwall UTM device.
- **Direct 10, 100 & 200:** guaranteed uncontended bandwidth speed for both upload and download with speeds of 10mps, 100mps or 200mps
- **Smoothwall:** The Universal Threat Management (UTM) filtering box is designed to provide a complete security solution in a single product, giving you complete protection and visibility in one place.