

Unit A

Communicating with colleagues, accessing information, finding resources

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Becta

Terminology

This Unit has been written for teachers and others working in all countries within the UK. There are differences in the legislation, terminology and structure of the educational systems in Scotland, Northern Ireland, and England and Wales and we have tried to reflect these in the document. In some specific Scenarios illustrating the use of ICT by individual pupils, we have given references to a scheme which is only applicable to one country – for example, the Literacy Hour in England and Wales – because it is necessary to make sense of the story.

For fuller information on terminology relating to each country, please see the section **Curriculum and Terminology in the UK**. This can be found at the back of your ICTS ring binder. You may well be corresponding with colleagues working in another part of the UK, and it will always be useful to have a common understanding of the language of education.

Throughout this Unit we have endeavoured to use the preferred spellings used by Oxford University Press and Cambridge University Press, as found in the current edition of the Oxford English Dictionary.

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Introduction

Communicating with colleagues is a vital part of your professional work. You will be:

- planning work
- recording outcomes
- recording information about Individual Education Plans (IEPs)
- finding out how others are solving problems
- celebrating success

to mention but a few!

Using the computer for many of these tasks can make your life easier. Changing information and updating is simple. You can provide professional looking documents and plans for others to see. Some software will even let you know when action, such as a review, is required!

In addition, electronic communication via the Internet has made communication with a wider network of colleagues and professional very simple. The Internet is a vast network of computers linked together around the world. This Unit is about using the Internet for communicating with colleagues, accessing information and finding resources.

You can send and receive emails (electronic mail) and can also search the World Wide Web (WWW or 'the Web') for information. These two modes of communication are interrelated, but generally speaking if you want to communicate with someone electronically, you will use email; if you want to find existing information you will use the Web.

This Unit is in two main parts. The first looks at communicating with colleagues in and around school. The second looks at communicating more widely.

Expected outcomes

By the end of this Unit, participants will...

- be aware of ways in which they can use ICT to improve their own professional efficiency
- be aware of ways they can reduce their administrative and bureaucratic burdens
- be able to use electronic mail to communicate with their colleagues
- be able to join, and participate in, electronic forums to access and share information
- be able find resources on the World Wide Web to inform their professional practice and enhance their teaching
- be aware of the accessibility issues for pupils with severe and complex learning difficulties when using the Internet

Key skills covered in this Unit

Word-processing skills

Become familiar with the editing functions of a word processor.

Use templates for the creation of documents.

Produce pro formas (templates) containing frames and or borders.

See Scenario 1

Use a dedicated IEP production package

Enter new information into the database.

Amend existing statements and criteria.

See scenario 1b, and 1c

Use communications software and the Internet

Become familiar with the basic functions of the communications software in use in your school.

See all scenarios

Send and receive email messages

Use your email software to send and receive email. Use the software to edit emails, reply to an email, send and receive email attachments. Forward an email to other recipients.

Understand how to manage your emails – delete, put in folders etc

Create your own automatic signature for your emails.

Devise activities to make email meaningful to your pupils.

See scenarios 2a, 2b, 2c, 2d, 3a, 3b, 3c, and 4a

Join an electronic mailing list

Use an email address or URL to join a mailing list. Understand the conventions involved in using, watching and contributing to a mailing list.

See scenarios 3b, and 3c

Operate a digital camera

Use your digital camera to take photographs. Use the software that came with your camera to 'download' the photographs onto your computer. Save (or export) the photographs as different types of file.

Save (or export) the photograph files to the folder you want to store them in. It is important that you know where your photographs are stored on your computer because you will need to be able to find them in order to send them as attachments.

See scenario 4a

Understand archives

Use mailing list archives and search for the information you need.

See scenario 3a, and 3b

Entering a Web site address (URL)

Use a Web address to go straight to a Web site. Add an address to your Favourites, or place a Bookmark at that address.

See scenarios 3b, 6, 7a, 7b, and 8

Finding information from a Web site

Navigate a Web site using hyperlinks to find the information you need. Use the Back, Forward and Home buttons to navigate a Web site.

Use a search engine within a site to find information quickly.

Use a search engine to locate other Web sites that may be of interest to your current enquiry. Understand the processes involved in searching.

See scenarios 3b, 6, 7a, and 7b

Participating in a Web conference

Log on to, and participate in a Web conference.

See scenario 8

Planning and creating a Web site

Use a word processor or Web page software to create Web pages. Use file transfer protocol (FTP) software to upload pages to your Web site.

See scenarios 7b, and 9a

Being aware of accessibility issues

Make use of software adaptations to give pupils access to electronic communication. Use access devices to allow access for pupils with physical, sensory or cognitive disabilities.

See scenarios 10, and 11

Scenarios

Whilst this Unit is not the place to provide detailed technical instructions on the use of specific applications or equipment, (you will need to consult the manuals for such information), we have identified a number of key skills that are required to carry out activities similar to those described below.

It is assumed that you are familiar the operating system your computer uses and can manage basic tasks such as starting up programs, simple word-processing, and saving and printing work. The key skills, the type of software and any peripherals will be listed at the end of each scenario. These will be linked to the activities, which you will find at the end of this Unit.

For convenience, the scenarios are mainly separated out into two sections (although there is inevitably some overlap), dealing with electronic mail and the World Wide Web.

Scenario 1 - Administrative tools

We live in a bureaucratic world. This is definitely true in the field of education. Individual IEPs, annual reviews, pupil reports and records, letters to parents and other professionals etc, are all part of a teacher's professional life.

The government when summarizing the consultation on the Code of Practice on special educational needs noted that 'Two thirds of those who commented supported a review of the SEN Code of Practice maintaining its existing principles but minimizing bureaucracy and paperwork, particularly in Individual Education Plans'. David Blunkett also recognized, by implication, that teachers were overburdened by paperwork by pledging to 'cut bureaucracy'. Whatever the outcome of the review of the Code of Practice or Mr. Blunkett's attempts to reduce the load, much of the paperwork will remain and we need to find ways of dealing with it as efficiently as possible.

In what ways can ICT help?

ICT has a role to play in many of the administrative jobs that a teacher has to do. The busy teacher can benefit greatly from the ease with which a computer allows you to store, recall, amend and organize information.

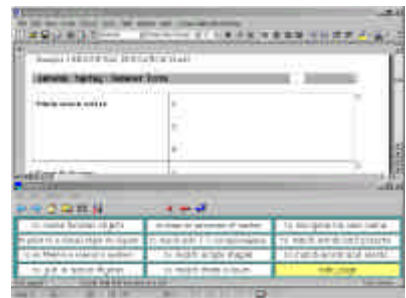
Word-processing

The word processor will be the general purpose tool most commonly used by teachers. If you have to reproduce a document, for example a letter, where there are only a few changes each time, the letter can be written with markers where text needs to be added, and stored as a template. When needed, the template can be opened, the markers overwritten and the letter printed and saved, if required, as a new file leaving the template unaltered. Some teachers may well prefer to write 'one-off' letters by hand but using the computer for standard letters will almost certainly save time. When writing reports, IEPs etc, it is possible to produce a pro forma on the computer, standardizing the document and allowing the teacher to complete it either on the computer or by hand.

Just having a writing frame with the main headings listed to focus thoughts can be of as much benefit to the teacher as it is to the pupil. The same can be true of word grids and overlays. Teachers have been known to create phrase banks containing the most commonly used phrases and descriptions they use in their reports. They can then enter them into their text at the click of a button or a press of the keyboard.

There are many other short cuts you can use when using a word processor. If you have kept records of pupils on the computer they can be copied across to reports when necessary rather than being retyped.

One of the strengths of the word processor is this ability to manipulate text – cutting / copying and pasting, sorting tables etc. In addition the use of the keyboard or mouse button short cuts, can, depending on the way in which you work, make using the software much easier.



using a grid to enter phrases

Spreadsheets and databases

You would use a spreadsheet if you wanted lists and tables of data, particularly if you wanted to analyse and manipulate the data. A spreadsheet will also let you sort your data by name, date of birth etc. Your word processor may well incorporate a table facility which will let you do similar sorting, possibly reducing the need for a spreadsheet.

IEPs and school reports could be produced using dedicated software which contains databanks of statements from which you can choose those appropriate to your pupils.

Where schools use SIMS as their administrative package they could use the SENCO module for administrative tasks related to special needs. This has been designed to help schools in following the Code of Practice. The module can be used to hold SEN information on any pupil and provide a constantly updated SEN register. All the details of periodic reviews can be recorded together with the date of the next review. An advantage of SIMS is that the pupil information is already on the system; a disadvantage is that you need access to the administrative system and this is not always possible. SIMS will let you export information; so if you wanted information about pupils you could extract it and use it in a spreadsheet or database.

Content free databases are less frequently used in schools but they do allow you to search and sort for the information for different purposes. A well designed database of the software and hardware resources of the school could help teachers locate equipment and make decisions on the appropriate software for a particular pupil.

Example 1a – Using a word processor more effectively

A teacher decided to create some letter templates and to spend some time familiarizing herself with the word-processing software so that she could write her letters, reports and lesson plans more efficiently. She drafted her letter, placing asterisks where the date and the names should be, changed the font and size of the text and made sure it was laid out as she wanted it. She then saved it as a template.

She then began exploring the word-processing package, discovering what happened if she used the right mouse button to try and do things instead of the left or if she clicked the mouse button more than once. She was surprised and pleased to discover that her version of *Word* gave her a choice of spellings when she clicked with the right mouse button over a misspelt word. Her spelling was generally good but she did make typographical errors and she found this a very quick way to correct them.

She also found that when she double clicked on a word she selected the word and she did not have to delete the selected text, since she could just type and her selected text would be removed, replaced by what she typed.

She used the index in the help facility of the program to look up 'mouse' and 'keyboard', to see if there were any features that might be useful; she was amazed to discover how many keyboard short cuts there were. There was no way she would remember, let alone use all of them but some would be very useful. She made a note of all the features she had found that she thought would prove useful to her and passed the information on to her colleagues.

Key skills and equipment

The key skills for the above example are:

- word-processing skills
- saving a template
- using a help file

The key equipment is:

- a computer complete with word processor

Example 1b – Creating and recording Individual Education Plans

Teachers in a special school decided to review the way they recorded IEPs. They felt that quite a lot of what they were writing on their IEP forms was similar for a number of pupils and wondered if there was a way of cutting down the time it took to complete them.

They discussed the problem and decided they wanted to be able to:

- select targets from a bank of options
- amend the targets easily
- enter their own targets and then keep them for future use

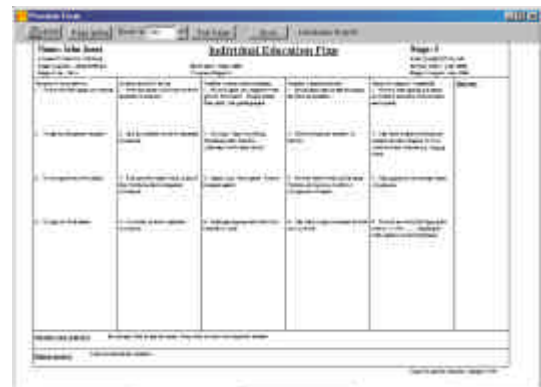
Someone mentioned hearing about report-writing software which had banks of statements from which you selected your comments and said that sounded like just the sort of thing they wanted.

A member of staff went away and looked in the archives of the SENCO-forum mailing list (see **Scenario 3 – Sending to a mailing list**) to see if there had been any discussion on such software.

She found that two had been mentioned – *IEP Writer* where the focus was considered to be primary, and *IEP Developer* which had a secondary focus. *IEP Developer* is designed to run on a network, allowing all the staff who teach the pupil to contribute to the IEP.

The teacher sent for an evaluation copy of *IEP Writer*. (The school did not have a network and the pupils were taught mainly by one teacher, so she decided *IEP Developer* was not appropriate for them.)

The staff, while they thought that some of the targets were not appropriate for their school population, liked the ease with which targets could be amended. They also found it easy to add to the banks of targets. They liked the fact that achievement criteria, resources and classroom strategies were also included. They felt that this method of creating IEPs would make their production easier and help standardize them across the school.



an Individual Education Plan from IEP Writer

Key skills and equipment

The key skills for the above example are:

- logging on
- typing in a URL
- using hyperlinks
- finding archived material
- amending and adding text within an application

The key equipment is:

- a computer linked to the Internet
- browser software
- a trial copy of IEP Writer

Example 1c - IEP writing

In another school staff room, staff were debating the same issue. Here staff were much more mixed in their views. They had met to discuss the format of their IEP and whether there was a more efficient way of completing it.

Some staff said that, whatever the decision on the format, they were very happy writing their IEPs and did not want to change their way of working. They often wrote a large proportion of them during the review meetings and would find a computer intrusive in that situation. A few confessed that their lack of typing skills would slow the process down far too much. Other members of staff took a different view. They thought they would prefer to word process the information but would like a framework within which to do so. A few wanted a more automated process which would enable them to add phrases and sentences at the touch of a button.

The staff decided to create a word-processed pro forma, which could be either printed out or completed on-screen. Someone had the idea that since on-screen grids were being used successfully in the school to improve the pupils' speed of writing, they could be used to create a bank of commonly used phrases and sentences to speed up IEP production as well.

That decision made, they began to consider the layout and organization of their existing form comparing it with others they had access to. Their local authority had produced some examples and they went to the DfEE SEN Web site www.dfes.gov.uk/sen/sencoinf.htm and downloaded the two example IEPs that had been provided there.

They compared the models they had, decided on a format, and constructed their own pro forma using the text boxes and text frames. They saved their page as a template; a new IEP would be opened as a new document so that when it was saved there would be no danger of the template being overwritten.



DfEE Web site page

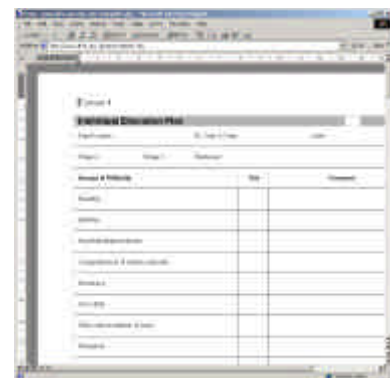
Key skills and equipment

The key skills for the above example are:

- downloading a file from the Web
- creating tables and text boxes within a word processor
- saving a document as a template
- creating an on-screen grid
- using an on-screen grid

The key equipment is:

- a computer linked to the Internet
- browser software



an example of an IEP template

Electronic communication

This section is intended to give you lots of ideas about how to use electronic communications to enhance your professional development and teaching. Some scenarios in this section will examine professional development issues, while some will focus on pupils using electronic communication.

Communicating by electronic mail

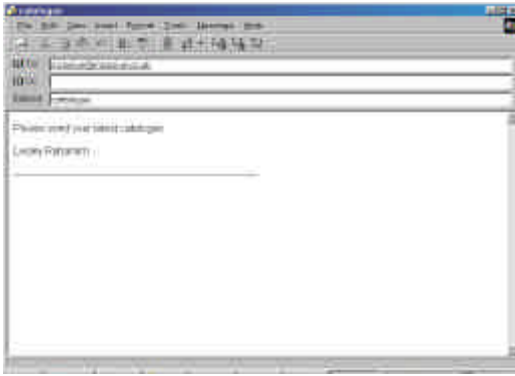
The Internet provides a fast and inexpensive method of communication through electronic mail (email). Email will be one of the services provided for you by your Internet Service Provider (ISP) who will give you your email address and the communications software you will need to send and receive messages. The large computer (the **server**) at your ISP stays connected all the time so that messages written to you can be stored there until you log on (connect) to the Internet and collect them. When you post a message to a friend it goes first to your ISP, who then sends it on to your friend's ISP where the message stays until your friend logs on to collect it.

Messages can be composed off line (not connected to the Internet) and sent when you are ready. The time taken to post and receive simple messages is short, so there is usually no need to spend much time online. Calls are usually charged at local telephone rates even if the eventual destination is the other side of the world, so email can be a very economical method of communication. Because messages can be posted at any time and then picked up at the convenience of the receiver, it is particularly useful for communicating across different time zones.

Email addresses start with an identifying name, then the @ sign followed by the name of the Internet Service Provider e.g. breakfastnews@bbc.co.uk or helpline@freeserve.co.uk.

Email addresses must be written precisely, with no spaces. The electronic postal service will not make guesses, so if you type an incorrect address it will be sent back to you as undeliverable mail. However, to save time and mistakes, addresses that you use frequently can be added to the **Address Book** of your email software. Then you can select them with one click rather than having to type them out each time. Some communications software has a prediction facility so that you do not even have to open the address book. As soon as you start typing the address it searches its store for addresses that you have used in the past beginning with those letters. All you have to do is click on the correct one.

When you log on to collect mail from your ISP, new messages appear in your **Inbox**. The message should have a subject line so that you can tell what it is about without opening it. If you are not interested in it (you may find you receive inappropriate junk mail or 'spam') you can delete it without opening it. If you suspect you have been sent email containing a computer virus, do not open it without first seeking advice. If you decide to open a message you can reply to it, save it for future reference, forward it to someone else, or delete it.



writing an email message in Outlook Express



messages in the Outbox ready to send

When you send a message it stays in your **Outbox** until you decide to log on to your ISP and post it. An economical way of using electronic mail is to compose several messages off line and then send them all out together. Electronic mail also saves time because you can copy the same message to any number of addresses and send them out with one click. You can even set up a group list of addresses so that when you click on the name of the group the message is sent out to everyone in it, making communication between large numbers of people fast and inexpensive.

Scenario 2 - Sending and receiving an email

A school has recently been connected to the Internet and members of staff have all been given email addresses. One teacher was particularly anxious about using the technology so the ICT Co-ordinator suggested she began by sending a message to herself. One morning before school she opened up the communications software on the computer and clicked on the icon for composing a **New Message**. A blank message sheet appeared so she typed her email address into the **Address Line**, being careful to copy it exactly.

Then she needed to put something in the **Subject Line** so she typed, 'my first email message'. In the message part of the sheet she just wrote 'Congratulations!' When she had finished she clicked the **Send** button, logged onto the Internet and selected the icon that sent the mail to the server. That evening, after school she logged on again, opened up the communications software and clicked the Receive Mail button. She was thrilled to see her message appear in the In Box. She opened it up and there was her message – 'Congratulations!'

With a longer message, she would probably use the spelling checker within the email software to check her message before sending.

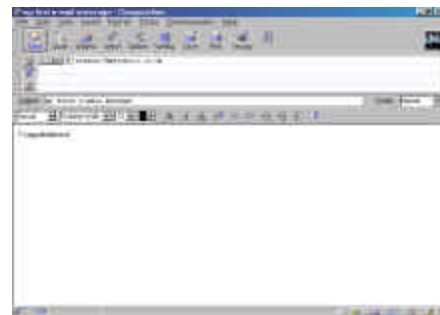
Key skills and equipment

The key skills for the above example are:

- logging on to the Internet
- launching email software
- sending an email message
- receiving an email message

The key equipment is:

- a computer linked to the Internet
- email software



my first email message

Scenario 3 - Sending to a mailing list

Introduction

The facility to send email messages to groups of addresses has resulted in the setting up of email forums, or mailing lists, by special interest groups. Mailing lists encourage collaboration between colleagues who are willing to share resources and expertise on local, national and international levels. Membership is free, and their size and activity level varies considerably. When you join a group you send one message to the forum and this is automatically sent out to all the other members. Some forums are moderated, which means that there is a person, or group of people, who take responsibility for ensuring that messages conform to the forum's code of behaviour, known as its netiquette. The moderators can remove members who do not conform to the list's code of behaviour.

Example 3a

A teacher in a special school for pupils with severe learning difficulties decided that joining a mailing list might support her in her professional practice. Using her Web browsing software she logged onto the Becta Web site to look at the descriptions of the forums hosted by them: www.becta.org.uk/inclusion/discussion/

The SLD forum seemed most appropriate to her needs so she clicked on the link to their archives to see what sort of messages had been sent in the past. The messages were very useful so she followed the on-screen instructions for joining the forum.

Key skills and equipment

The key skills for the above example are:

- logging on to the Internet
- entering a Web site URL
- using hyperlinks
- joining an electronic mailing list
- finding information from a Web site
- finding information from archives

The key equipment is:

- a computer linked to the Internet
- email and Web-browsing software



joining a mailing list, or forum

Becta hosts several moderated email forums:

SENCO forum is for discussing issues relating to the work of Special Educational Needs Co-ordinators

SENIT forum is for those with particular interests in finding out about IT solutions to support pupils with Special Educational Needs

SLD forum is for professionals involved in the education of learners with severe, profound and multiple learning difficulties

Information on the mailing lists currently hosted by Becta can be found on the Web page

www.becta.org.uk/inclusion/sen/discussion/



mailing lists hosted by Becta

Many more are hosted by Mailbase www.mailbase.ac.uk

Becta also keep archives of the discussions on these forums. For example the SENCO-forum archive can be found on from the main SENCO-forum page: www.becta.org.uk/inclusion/discussion/senfor.html Click on the *Virtual Teacher Centre* link.

Example 3b

The ICT co-ordinator of a special school for learners with physical disabilities wanted support in finding solutions to the school's access needs. A colleague in another school gave him a leaflet about the SENIT electronic forum, so he joined.

The first message he received from the forum was the introductory Welcome file that gave advice on participating in discussions and outlined the group's netiquette. After that he received copies of all the messages sent to the forum.

At first he read every message, following threads of interest but not participating. This was rather time-consuming so he began to delete messages unopened if he was not interested in the subject line.

When he felt he could add something useful to a discussion he clicked on the Reply icon and posted his contribution to the list.

The list asks members to add a Signature to their messages giving an indication of their role, so he used his communications software to create an automatic signature with his name, job title and school. He also added a sentence to the signature stating that the opinions he expressed were personal and did not necessarily reflect those of his employer.

Occasionally he initiated threads by sending in a question. The number of messages in his In Box grew to an unmanageable amount so he created a new folder and moved all the SENIT messages into that.

Then he configured the email software so messages from SENIT would go straight into the new folder rather than the In Box.

You could explore your own email software to find these options.



creating a folder for messages

Key skills and equipment

The key skills for the above example are:

- joining an electronic forum
- participating in email discussions
- setting up and configuring mailboxes
- adding a signature to email messages
- deleting email messages

The key equipment is:

- a computer linked to the Internet
- email software



setting up rules for messages

Scenario 5 - Newsgroups and bulletin boards

Newsgroups and Bulletin boards also provide platforms for discussion groups, and are accessed through the newsgroup facility provided by your ISP. You can subscribe to any number of the thousands of newsgroups available, but unlike email forums they do not send all messages out automatically to every member of the group. Messages sent to a newsgroup stay on the news server for a preset time. Subscribers request delivery of the messages when they decide they want to read them. The messages cannot be deleted or edited but disappear automatically after the predetermined passage of time. One newsgroup that might contain useful discussions is `uk.education.teachers`. However teachers should be aware that most newsgroups are un-moderated and subscribers may receive irrelevant or even offensive material.

The World Wide Web (WWW)

The World Wide Web (also known as WWW or just 'the Web') is the source of vast amounts of information on individual Web sites connected together via the Internet. A Web site is a location on the Internet that is rather like a book, but it is not linear. Like a book, each Web site contains a number (often a large number) of individual pages. Links (hyperlinks) on each page will take you to other pages, and so on, all around the Web.

You can get access to the Web through your ISP using software called a **browser**. The two most commonly used browsers are *Internet Explorer* and *Netscape*. You can find out just about anything from the Web if you know where to look but searching must be done online so it can become expensive.

Each Web site has its own unique address known as its Uniform Resource Locator (URL). Web site address begins with `http://` (hypertext transfer protocol) but you do not usually have to type it in because the browser uses this by default. Throughout this Unit addresses are written without the `http://` beginning. Most URLs, but not all, next have the letters 'www' followed by a full stop (dot). The information on a Web site is downloaded onto your computer when you connect to the Internet and type its URL into your browser.

For example: www.inclusive.co.uk

Like email addresses, URLs must be typed accurately; but typing addresses each time can be a laborious task. One way of making the job easier is to use the **hyperlinks** or **hotlinks** written into most Web pages. Hyperlinks are usually indicated by appropriate words written in underlined blue letters, or they may be shown as buttons (icons or simple shapes) with messages such as 'Click Here'. When you click on a hyperlink it automatically opens up a different Web page and in this way you can move from one page to another without having to type in addresses. In 'Web-speak' this is known as surfing or browsing.

Scenario 6 - Browsing

A primary school has recently had a network of computers installed and each classroom now has Internet connection. The computers are set up to open with the Home Page of the Internet Service Provider. Because the ISP is an educational provider the choices available from the home page are mostly relevant to the teachers' needs.

At the first training session led by the school's ICT Co-ordinator the teachers are exploring the Web by clicking on some of the Hyperlinks, shown as underlined words or icons. Every time they visit a new page, the browser remembers where they have been so that they can move backwards and forwards through their choices by clicking the arrow buttons on the toolbar.

Key skills and equipment

The key skills for the above example are:

- logging on
- using the toolbar navigation buttons
- using hyperlinks

The key equipment is:

- a computer linked to the Internet
- browser software



browsing the World Wide Web

Scenario 7 - Searching and Favourites

If you do not know the Web address of a site, or you do not know which site will give you the information you want, you can activate a search by clicking the appropriate button on the Browser toolbar. The software that carries out the search is called a **Search Engine**. There are several available such as:

AltaVista	–	www.altavista.co.uk
Ask Jeeves!	–	www.ask.co.uk
Excite	–	www.excite.co.uk
Google	–	www.google.co.uk
Infoseek	–	www.infoseek.co.uk
Yahoo	–	uk.yahoo.com

To start a search you enter a keyword or a question to give the engine an idea of what you want to find. The engine examines Web sites for the keywords that you have entered and returns the titles of sites that might be appropriate, usually with a short description attached.

You should then click on the most appropriate or ask it to search again. Most search engines allow you the choice of searching the whole Web or just UK sites. If you choose to search for Vikings across the whole Web you are likely to get responses about the Minnesota Vikings US Football team because the Web is still dominated by American sites. But if you search the UK only you are more likely to get responses about the Viking people in Britain. Some search engines ask you which sort of Vikings you want.

You can also refine your search with extra words to narrow it down. For example, if you want to find out about tornadoes to support a Geography project you might decide to search the whole Web for sites around the world. If you just enter the word 'tornadoes', the first selections produced will probably include sites about the Tornado fighter aeroplane and perhaps companies with the word Tornado in their trading names. Refining the search by entering 'tornado' and 'weather' will produce more appropriate results.

When you find a particularly useful page that you might want to visit again, you can add it to your Bookmarks or Favourites List – an address book of Web site URLs. The next time you want to visit the site you can go to your Favourites list and click on the name of the site to open it, rather than having to type the address in again. Some browsers also have 'smart' facilities that remember the URLs of sites you have already visited predicting the address you might want once you have typed the first few letters.



a search engine - Google



starting a search with Google



search results

Example 7a

A support teacher had recently been asked to work with a pupil diagnosed as having Asperger's syndrome and wanted to find out more about the condition. She thought the Web might help and had the URL of the National Autistic Society (www.oneworld.org/autism_uk) so she entered that into the address line of her browser software and logged on.

She looked at the home page of the site and decided that 'About Autistic Spectrum Disorders' might be a good place to start, so she clicked on that. The page gave her some interesting information on Asperger's syndrome, so she decided to save the URL of the page in her 'Favourites' list by clicking on the toolbar icon for adding to Favourites. Next time she wants to look at it she can open the Favourites list and click on its name to open it, rather than typing the address in. She then decided to try using the Search facility to find other resources on the Internet.



entering a Web site and...

She clicked the **Search** icon on the toolbar and a dialogue box opened. She typed Asperger's Syndrome into the **Search For** box and was presented with an initial list of 10 sites, each with a short description. She opened those she thought might be useful and added the most useful to her Favourites list.



adding it to Favourites for quick access next time

Key skills and equipment

The key skills for the above example are:

- logging on
- typing in a URL
- using a search engine
- adding URLs to Favourites / Bookmarks

The key equipment is:

- a computer linked to the Internet
- browser software

Example 7b

A teacher in a special school wants to create a Web site so he checks on what other schools are doing.

"I went to a talk at the BETT exhibition about special schools making their own Web sites. This was something I wanted to do so I thought I might get some ideas. The presenter described a research project that had been carried out and then introduced teachers from two of the schools involved. They gave some very useful practical advice and although the pupils in their schools had different needs to the pupils I teach, their general advice was helpful. The presenter gave the URLs of two Web sites that we could explore to find out more information:

" www.sed.kcl.ac.uk/special/makingweb.html is the home page of the project that the presenter was describing. From here I downloaded a copy of the report 'Making the Web Special' to read later. It is very easy to read and has given me lots of practical information.



making the Web special

“The link takes you to a list of special school sites with descriptions. There are nearly a hundred schools on the list and I did not have time to look at them all so I started by printing the list to take away and shortlist the ones that interested me. The name of each school is a hyperlink, so when I had made my shortlist all I had to do was click on it to get to the site. I added the most interesting ones to my list of favourites.”

Key skills and equipment

The key skills for the above example are:

- logging on
- typing in a URL
- finding resources
- using hyperlinks
- adding to Favourites / Bookmarks

The key equipment is:

- a computer linked to the Internet
- Web browser

If you wish to change your password you can do this in the **Profile Editor** (see below). Should you happen to forget your password, contact one of the forum administrators with your user name and email address and a new password will be assigned to you.

Please note that this user name and password are unique to your use of the Discussion Forum and will not allow you overall access to the **inclusive.net** Web site. Your school will have been assigned a user name and password to log in to the main Web site.

Joining in

Once you have an account you may participate in any of the available conversations. To post a message to an existing discussion fill in the **Add a Message** box at the bottom of the page. Where available, you may click on a **Create New Conversation** button to start a new discussion. This will add a sub-topic with the subject you specify and start a conversation with the initial message that you write. After filling in the subject line, post a message as described above.



a discussion 'thread' and message box to post a response

Key features and navigation of the inclusive.net Discussion Forum

Discussion

Topics

This displays the opening page of the forum which lists all the available topics open for discussion.

Last day

Show a list of all the messages posted to the forum within the last day.

Last week

Show a list of all the messages posted to the forum within the last week.

Tree view

Show a list of topics and subtopics in a tree view.

Utilities

New messages

Display all the new messages posted since you last visited the forum.

Keyword search

Search the forum by keyword, setting optional restrictions to a specific time frame or topic.

Profile Editor

The ***Profile Editor*** may be regarded as a control panel; users can log in to the Profile Editor and change various features of the forum to suit their needs. It allows the user to set their email address, to receive certain posts to the forum as direct email and to change their forum password. Profiles of users are available to anyone browsing the forum by clicking on the user name shown at the start of a posted message. The user may upload a small picture of themselves (up to 20 kB) and supply other personal information to create their profile.

One powerful feature of the **inclusive.net** Discussion Forum is that the user may choose to receive certain messages as direct email. Using the Profile Editor the user may choose to receive all posts to a certain topic, any replies to their own posts or copies of their own posts as email.

Get an account

To participate in the forum users must register an account. When you choose to 'Get an account' you will be prompted for a desired user name, your full name and your email address. Your user name must be unique so you may have to use your imagination! Your full name and user name will be displayed next to any messages you post. The email address you supply must be valid.

Help

Quick start

A short overview of the forum and how to begin using it

Getting started

A more detailed outline of the forum

Troubleshooting

The first port of call should you have any technical difficulties with the forum

Contact

How to contact the forum administrators

Leave the forum

Leave the Discussion Forum and return to the main **inclusive.net** Web site

Example 8

Web conferences are sometimes put up for a limited time to cover a particular event and some have a 'real-time' slot so that people can log on at a pre-announced time and take part in a debate. Web conferences can be a useful supplement to face-to-face discussion and have the advantage that you can 'attend' a conference whenever it suits you without having to travel anywhere. You choose the bits that interest you and make a contribution if you want.

A teacher working with pupils who have severe learning difficulties subscribes to the American journal 'Closing the Gap', which has articles about using ICT to support the education of learners with special needs. Every year the journal organizes a conference in the USA and although he cannot attend in person, the teacher is able to log onto the Web site (www.closingthegap.com) and participate in the post-presentation online conference. The site displays the text of the presentations given by key speakers so that he can read them online or print them to look at later. There is also a feedback facility where readers can make comments on the presentations or put questions to the speakers. These comments appear on the Web site and the presenter responds, creating an online discussion. It gives the teacher in the UK an opportunity to interact with some of the most interesting practitioners in the USA as well as share discussions with colleagues around the world who join in the online conference.

Key skills and equipment

The key skills for the above example are:

- logging on
- typing in a URL
- participating in a Web conference

The key equipment is:

- a computer linked to the Internet
- browser software



a Web conference on autism

Some issues to consider about the Web

The Web can be a source of valuable information for enhancing the curriculum. Some pupils find the interactive nature of Web browsing motivational, because they can follow their own route of exploration. Many will need help to tap into that information, perhaps starting by looking for information on a topic that particularly interests them. Or they may be helped by visiting a Web site that you know will be appropriate. Unlike email the Web does not always rely heavily on text for communication. Web pages often have pictures, sound, and even video clips or animation. Although these take longer to download, information presented in more than one mode may be more accessible for some pupils than that which relies on text alone. Even with text, Web authors tend to present work in smaller chunks that can be viewed at one go on the screen page.

Because it is easy for individuals and groups to write their own Web pages there are many that contain undesirable material such as pornography or racism. Most ISPs catering for schools screen content before it is passed on, to filter out such material. But even with screened content it is essential that schools establish ground rules for Internet use by their pupils. If possible pupils should be encouraged to consider the sort of material that might cause offence or be unacceptable. Parents may also wish to be involved. The school can insist on pupils signing a contract to cover these issues and wider ones such as security, copyright and transmission of materials between school and home. It is not practical for teachers to monitor what pupils are viewing at every minute, but the browser software record what has been viewed so it is possible to keep a check. Just as pupils are taught basic rules for avoiding danger in the world outside home and school, so should they be taught to avoid danger when exploring cyberspace.

Scenario 9 - Creating a Web site

ISPs usually provide space on the Web for their clients to have their own Web site. Physically this space is an area of a hard disc on one of the ISP's Web servers (computers). Writing for the Web is now fairly straightforward because you can avoid having to write in the special hypertext mark-up language (HTML) used by Web browsers. Word-processed documents can now be saved in HTML format ready for uploading onto the Internet, though often making Web pages look the way you want using this method is harder than using dedicated software. Programs such as *HotMetal Pro* allow pages to be created in different editing modes, akin to desktop publishing (DTP). There are also simple Web-authoring programs available, particularly targeted at pupils in schools, such as *SiteCentral* from TAG Learning Ltd. Although these products undoubtedly make creating pages easier than ever before, as someone responsible for maintaining a Web site it is worth considering learning some elementary HTML and using a text editor to create some simple pages. When things go wrong with these tools, as they sometimes do, it is useful to know a little HTML to look for obvious mistakes.

A basic HTML primer can be found at: www.htmlprimer.com

A more comprehensive explanation of HTML can be found at:
www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html

Whichever Web page creation tools are used it is good practice to proof pages off-line using as many different browser programs as possible. The most common browsers, *Internet Explorer* and *Netscape*, are available for free, and can be found on many computer magazine cover discs.

Web pages created off line are then sent to an ISP where they are stored, to be made available on the ISP's server for anyone to see with a Web browser. The process of transferring files to the ISP's server is called File Transfer Protocol (FTP). Some commercial programs have inbuilt features for sending or uploading pages to your Web space by FTP. However, the free or shareware tools such as *WS-FTP* or *CuteFTP* provide all the features necessary to upload Web pages. FTP tools generally work using a simple interface allowing both the local hard disc and the Web space on the ISP's server to be accessed simultaneously.

Teachers might want to create a Web site to publicize their school, share resources that they have found useful, or celebrate the achievements of their pupils. In creating their own Web site pupils have the means of publication for a new audience, involving them in a wider community.

The publication 'Making the Web Special' describes a project investigating the use of the Web in special schools. It can be found at: www.sed.kcl.ac.uk/special/makingweb.html

Once a Web site has been written, the owner might want to consider joining a Web ring, which links sites with similar themes. More details can be found at: www.webring.org

Example 9

A teacher wants to make a Web site for his school. The agreement between the school and its ISP gives them space on the Web and an address.

The teacher explained how he went about the task.

"We needed to think about the content and structure of the Web site – what we wanted to include and how the reader was going to move from one part to another. We decided to open with one digital photograph of the school and a menu of icons for the other pages – the school prospectus, a map, and an area for publishing the pupils' work. We wanted simple, uncluttered pages without 'frames'. Although we like the way some schools use

graphics, we did not want to have too many because they take so long to download. We were also concerned about pupil safety issues so decided not to include photographs of the pupils with names attached. There is also the issue of gaining the pupils' permission (and that of their parents) to publish photographs on the Web. In our view, some of our pupils do not have sufficient understanding of what the Web is to make asking their permission a valid prospect. There is no longer any need to know how to write in 'Web language' because we can compose pages in a dedicated program.

"A useful resource for us when we were planning our Web site was the publication 'Making the Web Special'.

"To begin designing the site we drafted some key pages such as a news page and a page linking to pupils' achievements and examples of work. We also made a list of resources we needed to collate, such as photographs and word-processed documents.

"We used our digital camera to take a photograph for the first page of the site. We downloaded it from the camera to the computer but it was too large for the front page. We used *PaintShop Pro* to resize the picture and saved it as a JPEG, as this is the best image format for photographs.



planning a Web site

"Any images we used we saved in a separate folder on our hard disc, so all the image files would be stored together. We also created a separate folder for the main sections to keep the Web pages organized as the site develops.

"We created our pages using *HotMetal Pro* which has an inbuilt preview mode so we could check as we went along what our pages would look like in a browser. As well as being able to type straight into the program; we were easily able to copy-and-paste text from word-processed documents that we had previously saved such as our school prospectus, our newsletter and examples of pupils' work. When we had made some Web pages we were happy with, we previewed them in Internet Explorer and Netscape to make sure they looked the way we wanted in more than one browser.

"We decided to use *WS-FTP* to upload our Web pages to our ISP's server as the software was provided free of charge by our ISP. We configured the software with the FTP address for our Web space and our user name and password. Once we were online we connected to our ISP's server with *WS-FTP* and uploaded our pages.

"We then checked our Web pages online with our browser by typing in our unique Web address provided by our ISP.

"We decided that a sensible way to manage the site would be to update it at the same time as we publish our next school newsletter."

Key skills and equipment

The key skills for the above example are:

- planning and writing Web pages
- using File Transfer Protocol
- operating a digital camera and saving the images to disc

The key equipment is:

- a computer linked to the Internet
- browser software
- Web page creation software – *HotMetal Pro*
- FTP software – *WS-FTP* or *HotMetal's* built-in FTP publishing function

Example 10b

In a school for pupils with moderate learning difficulties, frequent use is made of talking word processors to support the pupils' literacy. The pupils would like similar support when reading their email messages, so their teacher has shown them how to copy a message into the talking word processor. When the message arrives the pupils highlight the text in the message and select the **Copy** command. Then they open up the talking word processor and select the **Paste** command. This pastes the text into the talking word processor.

With this support the messages provide motivating, relevant reading material for the pupils. Some pupils have the whole message read out to them by selecting the **Read All** icon. Others pupils try reading the messages themselves using contextual and phonic clues, but they click on individual words if they want to hear them spoken out by selecting the **Read Word** icon.

The pupils also use technology to help them compose messages in text. Their teachers prepare *Clicker 4* on-screen grids with key words to help them write their messages.

The grids are configured to send the contents of the cells directly to the communications software so that when the pupils click on cells the words appear in the message box.

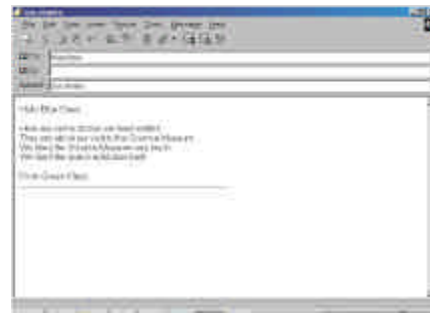
Key skills and equipment

The key skills for the above example are:

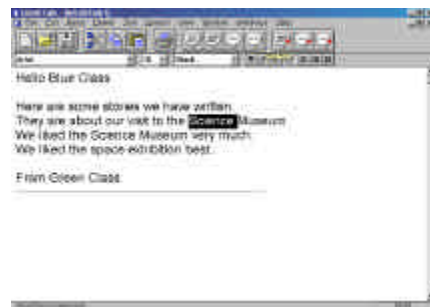
- copying text from communications software into a talking word processor
- making on-screen grids
- using on-screen grids with communications software

The key equipment is:

- a computer linked to the Internet
- email software
- a talking word processor, *IntelliTalk*
- grid-making software, *Clicker 4*



the email that arrived...



pasted into a talking word processor - IntelliTalk

Green Class	Blue Class	Science Museum	Space Exhibition
Hello	Thank you	Please	
liked	want	go	saw
stories	pictures	things	send
you	your	we	us
from	about		

on-screen grid for composing emails - using Clicker



setting up Clicker to send text straight into the email software

Example 10c

A secondary school for learners with severe and complex learning difficulties makes extensive use of symbol processors such as *Inclusive Writer* and *Writing with Symbols 2000*.

For many of their pupils unsupported text is not accessible so the teachers copy text email messages into a symbol processor as they are received.

For some pupils the teacher removes symbols from all but the key words to make the message more accessible. The pupils can then read their messages on screen or from paper printouts. Symbol processors help them compose messages too. Key words are prepared for the pupils with symbols on an overlay keyboard or an on-screen grid.

More recently they have acquired *Inter_Comm* which sits alongside *Writing with Symbols* or *Inclusive Writer* and allows the students direct access to writing, sending and receiving emails from within the symbol processor with which they are familiar.

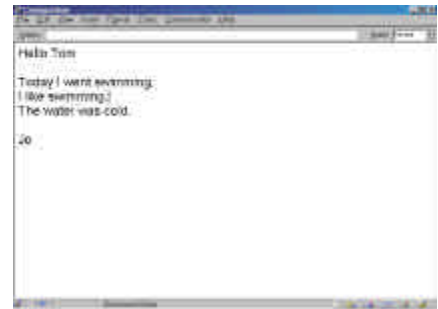
Key skills and equipment

The key skills for the above example are:

- copying text from communications software into a symbol processor
- removing symbols in a symbol processor
- composing electronic messages with a symbol processor
- making on-screen grids
- using on-screen grids with communications software

The key equipment is:

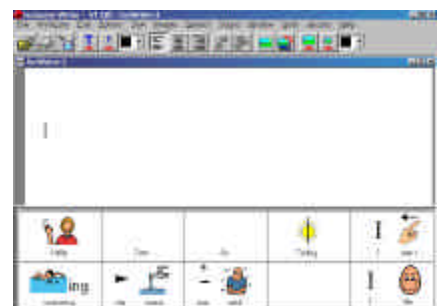
- a computer linked to the Internet
- email software
- a symbol processor
- grid-making software



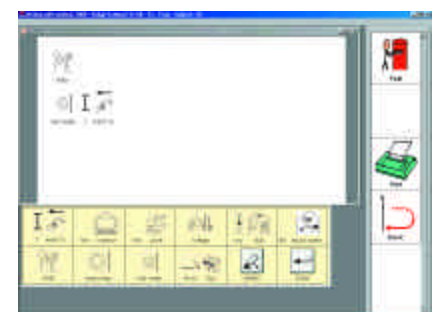
the email that arrived...



pasted into a symbol processor -
Inclusive Writer



grid support to write a reply



using Inter_Comm with a symbol
processor

Scenario 11 - Access to the Web for those with disabilities

Although the Web can be a powerful resource for teachers and pupils alike, it can also present accessibility difficulties for those with disabilities. The publication 'The Internet – An Inclusive Magnet for Teaching All Pupils' describes some of the advantages of using the Web but also considers issues surrounding the accessibility of Web sites for users with disabilities. It can be downloaded free of charge from www.wid.org/tech/handbook

It is possible to type in the URL for every site you wish to visit but this is time consuming and mistakes can easily be made. The usual method of accessing different sites on the Web is to start with one Web site and then click on hyperlinks to navigate, making selections with a mouse. Both methods can present barriers for those who cannot use a keyboard or mouse easily.

For some pupils with physical difficulties, substituting a rollerball for the mouse will be enough.

Access through a touch screen is simple and easy for browsing using links. You just touch the links you want to follow.

Taking advantage of the accessibility options in the computer's operating system may also remove barriers. See **Unit B - Organizing your Resources** for more information

There are also keyboard alternatives for some of the mouse actions, such as using the arrow keys to scroll up and down pages, or the Tab and Enter keys to navigate and select within choice boxes.

Opera is a fast, multi-platform browser which allows comprehensive keyboard access to the Internet. Even sites using tables and frames can be navigated successfully via the keyboard. Further information is available from <http://opera.nta.no>.

For those pupils who use switches for their input to the computer, software applications such as *ClickIt!* can be used to add hotspots to the most important parts of the Web page.

You will find examples of classroom and pupil use in other Units within this programme, but a few examples are given here for information.

Example 11a

A teacher in a school for pupils with physical disabilities has made adaptations so that the pupils can all have access to the Web. The pupils have a variety of needs that necessitate a variety of access solutions.

One pupil uses a rollerball rather than a mouse. The mouse speed is slowed down by altering the settings in the Control Panel and the locking mechanism of the rollerball is switched on to overcome drag-and-click problems. The cursor is enlarged to make it easier to locate.

Another pupil cannot use a mouse or rollerball but is able to access a keyboard with a guard. He uses keyboard alternatives for the mouse actions such as using the **arrow** keys to scroll up and down pages, or the **Tab** and **Enter** keys to navigate and select within choice boxes.

A third pupil has considerable learning difficulties and uses a touch screen because it is a more direct form of access. The mouse movements are transferred to the action of a finger on the screen.

Another pupil not uses neither a keyboard nor a mouse. She uses switches and has very limited access to the Internet. Sometimes she works with a facilitator who uses the mouse to navigate for her so that she can select with a switch. In order to improve independent access to her favourite Web sites, her teacher has used the *ClickIt!* utility to make scanning hotspots for important navigational areas of each page.

Another switch user has not learned to scan but his teacher has prepared *ClickIt!* hotspots for his favourite Web page placing two on each page. One of two switches corresponds to each hotspot so that he can select the one he wants by direct access.

Key skills and equipment

The key skills for the above example are:

- being aware of accessibility issues
- making software adaptations to improve accessibility
- making hardware adaptations to improve accessibility

The key equipment is:

- a computer linked to the Internet
- browser software
- accessibility options built into the computer's operating system
- touch screen, rollerball, keyguard, switches

Example 11b

Pupils with low vision often encounter difficulties accessing the Web. Both the computer's operating system and the browser software will have options for altering font sizes and colours to improve visibility. Screen magnification is another possibility but unless the reader has a concept of the whole screen it can be confusing. Screen-reader utilities convert text into synthesized speech but are impeded by pages heavily loaded with graphics. Alternative text descriptions must be attached to each image when writing Web pages so that the screen reader can read them out. If the images are not required at all the browser can be set so that only their descriptions are downloaded, making the speed of information transfer much quicker. Web sites written with information displayed in frames also create problems if the screen reader does not know which frame to read out.

A teacher working with pupils who have low vision has made adaptations so that the pupils can all have access to the Web.

For one pupil the browser software has been set up with large font sizes and high contrast colours to improve visibility.



a Web site set with high contrast



a Web site displaying large fonts

Another pupil uses screen magnification to make areas of the screen more visible.

A third pupil needs a screen reader to read out the text on screen. The browser is set up to give the Alternative text description for graphics. When the option is available, she chooses the frame-free version of a Web site.

Another pupil also uses a screen reader but cannot see images at all; so the browser is set to stop images being downloaded. This speeds up the downloading of pages. If Web sites offer a text-only version he chooses it.

Key skills and equipment

The key skills for the above example are:

- being aware of accessibility issues
- making software adaptations to improve accessibility
- selection of Web sites that are accessible

The key equipment is:

- a computer linked to the Internet
- browser software
- Accessibility Options built into the computer's operating system

The increasing use of sound files in Web sites will not be accessible to many pupils with hearing difficulties, so it is important that text captions are added to describe what is being played.

Many of the problems encountered by Web users with disabilities would be alleviated if Web page designers considered all potential users! Clear, uncluttered pages benefit everyone and offering a text-only, frames-free version of a site will help those who use screen readers.

More guidance about accessible Web design can be found at:

Trace Research and Development Centre: www.trace.wisc.edu/world/web/

Microsoft Accessibility Pages: www.microsoft.com/enable/dev/web/guidelines.htm

The World Wide Web Consortium: www.w3.org

Web designers who want to know how accessible their own site is can submit it to Bobby, a Web-based tool found at: www.cast.org/bobby

Bobby is a free public service provided by the Centre for Applied Technology (CAST) in the USA. It will examine your Web site and send you a report indicating any accessibility problems found in it. If the site is considered accessible, CAST issues a 'Bobby-Approved' certificate that you can display on your site.

Finding and using resources - some useful Web sites

Although the Web is such a rich resource of information to enhance their teaching, the sheer volume of it and the time taken to find what they want discourages many teachers. Collecting useful URLs, browsing or using search engines can locate many resources, both for curriculum use and professional development; and adding URLs to your Favourites or Bookmarks list will ensure that you can locate them easily. But there are also collections of pages that have been developed with the aim of finding applicable resources easier. Your own LEA may have such a collection.

The DfEE Inclusion site inclusion.ngfl.gov.uk is a free database developed by Becta. The aim of the site is to provide information on resources that support curriculum planning so that all learners participate fully in the education process. Its objectives are to provide information on inclusion; supporting materials, access strategies and examples of good practice; a range of contact information for products and services and access to self-study materials and professional networks. The Web site will enable visitors to search for specific pieces of information. Providers will be able to submit resources to be referenced from the site. The intention is for the site to be a gateway with little content of its own, but it will reference, describe and provide links to available external resources, including those on the various DfEE and education agency sites.

There are also collections developed by commercial enterprises. These are sometimes available free of charge, such as the Tesco supermarket chain's SchoolNet 2000 www.tesco.schoolnet2000.com (free to all UK schools) and LearnFree learnfree.co.uk provided by the Times Educational Supplement and aimed at parents. Others are available only on payment of a subscription, although some like RM's EduWeb www.eduweb.co.uk provide free entry-level information but charge for a complete service.

The following collection of Web sites will give you an idea of the sort of information you might find useful.

Some Web sites for general professional development in SEN

- **Becta** (The British Educational Communications and Technology agency) – information on ways of using ICT in education. www.becta.org.uk
- **Becta** Special Needs and Inclusion area – lots of information about using ICT to support learners with special needs, including links to the archives of useful mailing lists. www.becta.org.uk/inclusion/
- **David Fulton Publishers** – specialize in books about teaching in special education. www.fultonbooks.co.uk
- **DfEE Special Needs** – information on legislation, organizations and projects. www.dfes.gov.uk/sen/senhome.htm
- **Education Unlimited** – news items and articles on educational topics developed by the Guardian / Observer newspapers. www.educationunlimited.co.uk
- **Inclusion** – a free, searchable catalogue of online resources to support teaching professionals, parents and carers in meeting individual learning needs. inclusion.ngfl.gov.uk
- **Inclusive Technology** – this company's Web site has useful information pages on topics of interest to teachers of pupils with special educational needs. www.inclusive.co.uk
- **Mailbase** – a directory of discussion lists primarily for the UK higher education community. www.mailbase.ac.uk

- **National Association for Special Educational Needs** – the NASEN Web site gives information about its activities. www.nasen.org.uk
- **National Grid for Learning** – a collection of resources brought together by the UK Government. The Schools area has a Special Needs section. www.ngfl.gov.uk
- **Qualifications and Curriculum Authority** – an overview of curriculum, assessment and qualifications. www.qca.org.uk
- **Questions Publishing Online** – this Web site has a search facility that enables you to find articles published in Question's group of journals, as well as descriptions of relevant books. www.education-quest.com
- **Teacher Training Agency** – the special educational needs section gives information on the latest government policies regarding the training of teachers in SEN. www.teach-tta.gov.uk/sen/
- **Times Educational Supplement** – an online version of the educational newspaper. www.tes.co.uk
- **Widgit Software** – the special needs section of this company's Web site has lots of useful information. www.widgit.co.uk
- **Xplanatory** – pages of resources, information and ideas developed and maintained by the Special Needs Research and Development Centre at Canterbury Christ Church College of Higher Education. www.canterbury.ac.uk/xplanatory/xplan.htm

Some Web sites dealing with inclusion issues

- **Alliance for Inclusive Education** – a Web site that describes this organization's campaign for inclusion. www.btinternet.com/~allfie
- **Centre for Studies on Inclusive Education (CSIE) Inclusion page** – advice and information on the work of the CSIE in promoting inclusive education. inclusion.uwe.ac.uk
- **Enabling Education Network (EENET)** – an information sharing network aiming to support and encourage inclusion. www.eenet.org.uk
- **ISEC 2000** – a Web site that gives information about the International Special Education Congress in Manchester July 2000. www.isec2000.org.uk
- **UNESCO Salamanca Statement** – text of the inclusive education framework adopted at the 1994 Salamanca conference. www.unesco.org/education/educprog/sne/

Some Web sites with information about physical and sensory disabilities

- **Assessment Centres** – these centres have their own Web sites:

AbilityNet – www.abilitynet.co.uk

ACE Centre Advisory Trust – www.ace-centre.org.uk

ACE Centre-North – www.ace-north.org.uk/

CALL Centre – callcentre.education.ed.ac.uk

CENMAC – www.cenmac.demon.co.uk

Computability Centre – www.bcs.org.uk/computab/

- **British Association of Teachers of the Deaf (BATOD)** – a Web site for teachers of Hearing-Impaired pupils. www.batod.org.uk
- **Deaf@x Trust** – includes information on using technology with hearing impaired pupils. www.webcom.com/deafax
- **Dyspraxia Foundation** – a Web page with information about dyspraxia and the support available. www.emmbrook.demon.co.uk/dysprax/homepage.htm
- **Forest Bookshop** – Web site of specialist publishers in the area of deafness and deaf issues. www.forestbooks.com/system/shopassistant.htm
- **National Deaf Children's Society (NDCS)** – information on childhood deafness. www.ndcs.org.uk
- **Royal National Institute for the Blind (RNIB)** – a large Web site with plenty of information about visual impairment itself and ways of supporting learners with low vision. www.rnib.org.uk
- **Scope** – information on services for people with cerebral palsy. www.scope.org.uk
- **SENSE** – a Web site that promotes awareness of deaf-blindness and offers support services. www.sense.org.uk

Some Web sites with information about general and specific learning difficulties

- **British Dyslexia Association (BDA)** – information on resources, local support and publications. www.bda-dyslexia.org.uk
- **British Institute of Learning Disabilities (BILD)** – information and resources to raise awareness of Learning Disabilities. www.bild.org.uk
- **Down Syndrome Educational Trust** – the Web site offers advice and information for parents and professionals caring for individuals with Down Syndrome. www.down-syndrome.net
- **Dyslexic.com** – a Web site from the Lansyst Company that particularly useful information on dyslexia. www.dyslexic.com
- **LD OnLine** – an American interactive guide to learning disabilities for parents, teachers and pupils. www.ldonline.org
- **National Autistic Society** – information on autistic spectrum disorders and the services provided by the NAS. www.oneworld.org/autism_uk

Some Web sites with information about medical conditions

- **British Epilepsy Association** – information about the services provided by the association, and Beach Park, an area for pupils. www.epilepsy.org.uk
- **Contact a Family** – support and advice for parents and a directory giving information on over 1,000 rare syndromes and disorders. www.cafamily.org.uk
- **Sickle Cell Society** – as well as information about Sickle Cell Disease, this site has Planet Sickle pages for pupils who have the condition. www.sicklecellsociety.org

Some Web sites with information about speech and language difficulties

- **Afasic** – promotes understanding, acceptance, equal opportunities and the inclusion into society of pupils and young adults with speech and language impairments. www.afasic.org.uk
- **Communication Matters** – information and links about the Augmentative and Alternative Communication (AAC) needs of people with severe communication difficulties. www.communicationmatters.org.uk
- **Pippy** – lots of ideas for working with pupils at this American site. www.aacintervention.com

Some Web sites with information about assistive technology

- **Apple Computers Education Disability Resources** Web page. www.apple.com/education/k12/disability
- **BBC Education Betsie Site** – for text only versions of the BBC Web pages. www.bbc.co.uk/education/betsie
- **Center for Applied Special Technology** – includes details of the Bobby Web tool for checking accessibility. www.cast.org
- **Closing the Gap** – the online version of the US journal that promotes the use of computer technology in special education. www.closingthegap.com
- **Microsoft Accessibility** – information on accessibility tools for their products. www.microsoft.com/enable/
- **Trace Center** – includes details of Universal Design Principles and Guidelines. www.trace.wisc.edu/world/gen_ud.html
- **World Wide Web Consortium (W3C)** – Guidelines for Accessible Web Authoring. www.w3.org

Some Web sites with curriculum resources

- **Advisory Unit: Computers in Education** – this company's Web site has a Concept Keyboard Exchange with free downloadable resources to use with their Concept Plus program. www.advisory-unit.org.uk
- **BBC Online Education** – starting point for resources and links to other Web sites. www.bbc.co.uk/education/
- **Channel 4 Learning** – online support for Channel 4 Schools' television programmes. www.4learning.co.uk
- **Creative Communicating** – ideas and resources for pupils with disabilities. www.creative-comm.com
- **Crick Software** – this company's site has free downloadable resources on their Clicker Grids for Learning page for users of the *Clicker* program. www.cricksoft.com
- **EduWeb** – Curriculum support site from RM, parts of which are free to access. www.eduweb.co.uk
- **IntelliTools** – this company's site has a free Activity Exchange where resources made with their products can be downloaded free of charge. www.intellitools.com
- **Quest** – allows pupils to explore items from the Natural History Museum by clicking on pictures and symbols. www.nhm.ac.uk/education/quest2/english/

- **Simon's Raising Achievement Web site** – a Web site developed and maintained by a Learning Support teacher to share resources that he has found useful. www.smidgley.co.uk

Some school Web sites

- **Foxdenton School and Integrated Nursery** – a clearly presented Web site that presents information about the school. www.foxdenton.oldham.sch.uk
- **Frank Wise School** – another clearly presented Web site that presents information about the school. easyweb.easynet.co.uk/~frankwise/
- **Meldreth Manor School** – this prize-winning site allows the visitor to choose between multimedia, text-only and switch-accessible versions. www.meldrethmanor.com
- **Internet and Special Schools** – an alphabetical list of Web sites created by special schools and Pupil Referral Units. www.sed.kcl.ac.uk/special/

Practical teaching activities

Please choose and complete one or more of the following activities:

1. Templates and short cuts

Look at the letters that you have to write to other professionals and parents. For any that are duplicated from time to time create a template that can be used whenever required. Spend some time familiarizing yourself with the features of the word processor which could make your use of it more efficient. Make an annotated list of the keyboard short cuts, mouse and menu options which you feel will be most useful to you. If another colleague undertakes the same task, share your findings and collate the list. Are there any features you discovered which you think would be useful to some of your pupils?

2. Create a pro forma

Design your own pro forma for an IEP, pupil record, or any other form you might need. Think about what you want to include and how you want it presented. Compare and contrast the different ways you can create boxes in the document – tables, text boxes, borders – and decide which method works best for you. You might like to look at the way the IEPs on the DfEE Web site have been created: www.dfes.gov.uk/sen/sencoinf.htm

3. Which IEP format?

Examine the IEP format that you use in school. What are its strengths and weaknesses? In what way, if any, does it need changing? Compare it with a dedicated IEP-writing package. Which method of writing IEPs would suit your school best? Why?

4. Search for information

Choose a pupil in your class - perhaps a reluctant learner or someone who is not interested in the Web. Think about the child's interests and use the search facility to find three sites that would motivate the pupil.

5. Search for resources

Think about a pupil in your class with a physical, sensory or learning disability and the areas of the curriculum that present potential barriers to progress. Log on to the DfEE Inclusion site inclusion.ngfl.gov.uk and use its search facility to find resources that might be appropriate.

6. Search engines

Click on the Search button of your Web browser and try searching for 'tornado' to find out about the meteorological phenomenon, or 'Brunel' for information on the engineer Isambard Kingdom Brunel. You might need to refine your search by adding 'weather' to tornado or 'Isambard' to Brunel (and probably 'Kingdom' too, or you will get his father). Try the same search with different search engines e.g. www.altavista.co.uk, www.ask.co.uk, www.excite.co.uk, www.google.co.uk, www.infoseek.co.uk or uk.yahoo.com

7. Mailing lists

Log on to the list of Inclusion forums supported by Becta www.becta.org.uk/inclusion/discussion/. Find the hyperlink to the SLD Forum — a mailing list for teachers working with pupils who have severe learning difficulties. Click on the link to move to the forum's page and read the information. Then click on the hyperlink to the archives of messages already sent to the forum and read some of them. If you think the list might be helpful to your professional practice, return to the SLD Forum page and follow the instructions to join. If not, return to the list of Becta forums and choose another one to join.

8. Access to the Internet

Think of the access needs of the pupils in your class. What software and hardware utilities would help them gain better access to the Internet? Write a profile of each pupil with the adaptations you propose.

9. Symbols and emails

Think of a pupil in your class who might need support in reading emails. Choose either a talking word processor or a symbol processor; whichever is more appropriate to the pupil. Send a test message to yourself and then copy it into the talking word processor or symbol processor to see how it would assist your pupils.

10. Text support for emails

Think of a pupil in your class who might need support in composing emails. Think of the words and phrases that might help the pupil compose the message and prepare either an on-screen grid or an overlay for the overlay keyboard with those words.

Appendix 1 - Key resources

IEP writing software

IEP Writer

www.learnhowpublications.co.uk

IEP Developer

www.Special-IT-Solutions.co.uk

A computer linked to the Internet

Emailing software

Outlook

Microsoft

Outlook Express

Microsoft

Eudora

Qualcomm

Netscape Messenger

Netscape

Browser software

Internet Explorer

Microsoft

Netscape Navigator

Netscape home.netscape.com/uk/download/

Opera

Opera Software www.opera.com

Digital camera

Kodak, Olympus, various

Compression software

WinZip

Winzip Computing Inc. www.winzip.com

StuffIt

Aladdin Systems www.stuffit.com

Overlay keyboards

IntelliKeys overlay keyboard

Inclusive Technology, Keytools, Semerc

Concept Universal keyboard

Semerc

Overlay Editors

Overlay Maker (IntelliKeys)

Inclusive Technology

Concept Plus (Concept keyboard)

Advisory Unit

Informax (Concept keyboard)

Semerc

Talking Word processors

IntelliTalk

Inclusive Technology

Inclusive Writer

Inclusive Technology, Widgit Software

Writing with Symbols 2000

Widgit Software, Inclusive Technology

Talking TextEase

Softase

First Word

Research Machines

Text to Speech facilities

textHELP!

textHELP Systems Ltd, Inclusive Technology

JAWS

Sight & Sound, PVS, RNIB (See Appendix 1 in **Units 9** and **10** for supplier details)

On-screen word bank software

Clicker

Crick Software, Inclusive Technology

Inclusive Writer

Inclusive Technology, Widgit Software

Writing with Symbols 2000

Widgit Software, Inclusive Technology

Symbol / picture processors

Writing with Symbols 2000

Widgit Software, Inclusive Technology

Inclusive Writer

Inclusive Technology, Widgit Software

Rollerball

Penny & Giles Rollerballs
MicroSpeed rollerball

Inclusive Technology, Semerc
Inclusive Technology

Keyguard

Inclusive Technology, Special Access Systems

Touch screens

Touch Monitor
TouchIT

Inclusive Technology
Semerc

Switches

Inclusive Technology, Liberator, Semerc, QED 2000

Switch interface

Serial switch box

Inclusive Technology, Semerc, Widgit Software,
Crick Software

Don Johnson switch interface
SwitchBox
SwitchBoard
Mouser

Don Johnston Special Needs, Inclusive Technology
Inclusive Technology
Inclusive Technology
Semerc

Hot-spot software

ClickIt!
Hot Spots

Inclusive Technology
Ace Centre Advisory Trust

Appendix 2 - Suppliers

ACE Centre Advisory Trust

92 Windmill Road
Headington
Oxford OX3 7DR
Tel. 01865 759800
Web: www.ace-centre.org.uk

Inclusive Technology Ltd

Gatehead Business Park
Delph New Road, Delph
Oldham OL3 5BX
Tel. 01457 819790
Web: www.inclusive.co.uk

Softease Ltd

Market Place, Ashbourne
Derbyshire DE6 1ES
Tel. 01335 343421
Web: www.softease.co.uk

Advisory Unit

Computers in Education
126 Great North Road
Hertfordshire AL9 5JZ
Tel. 01707 266714
Web: www.advisory-unit.org.uk

KeyTools

PO Box 700
Southampton SO17 1LQ
Tel. 01703 584314
Web: www.keytools.com

Special Access Systems

4 Benson Place
Oxford, OX2 6QH
Tel. 01608 811909
Web: www.specialaccesssystems.co.uk

Crick Software

35 Chartergate
Quarry Park Close
Moulton Park
Northampton NN3 6QB
Tel. 01604 671691
Web: www.cricksoft.com
www.clickergrids.com

Liberator Ltd

Whitegates, Swinstead
Lincolnshire NG33 4PA
Tel. 01476 550391
Web: www.liberator.co.uk

Texthelp Systems Ltd

Enkalon Business Centre
25 Randalstown Road
Antrim
Co Antrim BT41 4LJ
Tel. 02894 428105
Web: www.texthelp.com

Don Johnston Special Needs

18 Clarendon Court
Calver Road
Winwick Quay
Warrington WA2 8QP
Tel. 01925 241642
Web: www.donjohnston.com

RM (Research Machines)

New Mill House, 183 Milton Park
Abingdon
Oxon OX14 4SE
Tel. 01235 826000
Web: www.rm.com

Widgit Software

26, Queen Street, Cubbington
Leamington Spa CV32 7NA
Tel. 01926 885303
Web: www.widgit.com

Semerc

Granada Learning Ltd
Granada Television, Quay St
Manchester M60 9EA
Tel. 0161 827 2966
Web: www.semenc.com

Appendix 3 - Language of the Internet

Electronic communication, whether email or Web pages, tends to use a new language! This largely consists of acronyms and jargon. As a relatively young form of communication, it is probably necessary to describe some of the terminology (if only to promote communication between users).

A short glossary of terminology is included here to help you:

Address	The unique combination of characters that determines the recipient of an email message or the location of a computer on the Internet (e.g. a Web site).
Address book	A function of email software, to hold frequently-used email addresses.
Attachment	A file that is attached to an email message. Attachments are used when information other than plain text is to be sent.
Bookmarks or Favourites	A function of Web browser software, to hold frequently-accessed Web site addresses (URLs). URLs may be grouped into folders for better organization.
Bulletin Board	A space on the Internet where messages can be posted for others to see and comment on.
Chatrooms	Unsupervised areas on the Internet where anyone can join online conversations. Pupils need to be alerted to the dangers of using these rooms and given strategies for safe use.
Download / Upload	The process of collecting files from / sending files to a server on the Internet. Pages for your web site must be uploaded to a Web server, to be seen by other Web users.
Email	Short for electronic mail – messages that are communicated through the Internet.
Forum or mailing list	An Internet space where people can meet to discuss topics of mutual interest. Messages sent to email forums are automatically sent out to all other members.
FTP	File transfer protocol is used to download or upload files between your computer and a server on the Internet. It is commonly used for transferring large files (e.g. software downloads) and for uploading your web pages.
html	Hypertext markup language – the codes used in a Web page to specify the way it is laid out, what graphics are included, and how it links to other Web pages.
Hyperlink	A means of navigating around the Web – clicking on a hyperlink opens up a different Web page, sometimes from a different Web site.
Internet	An electronic network that links computers from all over the world.
ISP	Short for Internet Service Provider – the organization that provides the connection from your computer to the Internet.
Netiquette	An agreed code of behaviour for using parts of the Internet, e.g. mailing lists.
Newsgroup	Another type of Internet discussion forum. Messages sent to a newsgroup can be received by anyone subscribing to the group on their news server .
On / Off-line	When online your computer is connected to the Internet. When off-line it is not.
Search engine	A Web site that enables you to find relevant pages on the Web by typing in key words.
Server	e.g. Web server, FTP server, news server, email server, etc. A computer permanently connected to the Internet, providing services to Internet users.
Upload	The process of sending files from your computer to a server computer on the Internet.
URL	A unique address for any file on a server on the Internet. URLs starting with ' http:// ' specify a Web server, and the page you want to view.
World Wide Web	WWW or just ' the Web ' for short – A world-wide collection of server computers holding hyperlinked documents, connected through the Internet.
Web conferencing	A Web site that enables you to participate in an online discussion on particular topics.
Web page	A single document on a Web site (a collection of pages on a Web server).
Web ring	A group of Web sites with similar themes, linked together.