



# The Internet and Education

## What is the Internet?

The Internet is a huge network of computers making a worldwide community, with millions of members, providing a vast store of information with great possibilities for education. More than half of all primary schools, all colleges and virtually all secondary schools already have an Internet connection and the Government's target is for all schools, colleges and libraries to be connected by 2002. The home user market is also expanding swiftly.

The Internet offers a range of facilities, allowing users to obtain information and resources, to communicate with each other and to publish information. Some of the most frequently used facilities include:

The **World Wide Web (WWW)** or **Web** provides easy access to the vast quantity of information and resources available on the Internet and is the facility which people use to 'surf' for information. It is made up of millions of screens, or 'pages', of information. The collection of pages created by one individual or organisation is known as a **website**. Each page can include text, images, sound, animation and video and has its own unique address.

E-mail allows users to send and receive written messages via a telephone line. Students have used e-mail for communicating with pen pals, to send questions to a specialist (such as a vulcanologist) to help with project work, and to swap information, for example, about their locality and weather with students in other countries.

**Mailing lists** usually consist of a group of people who exchange e-mail about a subject that interests them. For instance, a mailing list called 'ukschools' allows people with an interest in education to write to the list about any relevant topic, alert one another to useful websites or ask for help and advice.

**Internet Service Providers (ISPs)** provide the link between the user and the Internet. Some provide a free service and with others charges vary according to the type of connection, amount of use and additional services such as filtering.

**Newsgroups** are like international noticeboards where people log in to a particular group to read and contribute remarks or



questions. There are thousands of newsgroups covering any and every topic and interest, including some which could be considered offensive. Consequently, some ISPs choose not to offer their subscribers all groups, or do not carry news at all. Nonetheless, older students have benefited from access to newsgroups, which have helped to expand their knowledge and allowed them to discuss specific topics in depth.

**Chat rooms** allow a number of people to 'meet' on the Internet and have live, 'real-time' conversations. It is similar to having a telephone conversation with a number of people at once except that the participants type instead of talk. Open chat lines are not often used in schools, to avoid any possible compromise to pupil safety. However, chat rooms are very popular with pupils who have on-line access at home. Individual websites, such as those produced by the BBC (<http://www.bbc.co.uk/education/schools/>) and the Science Museum (<http://www.nmsi.ac.uk/>) are increasingly setting up specific times for question and answer sessions with subject experts or well-known personalities, which have relevance to the school curriculum.

**Video conferencing** enables two or more people, in different locations, to see one another while they talk. Secondary schools, in particular, have used video conferences as a resource for language learning, for example. It is also possible to arrange for the exchange of audio, video, images or any other digital file to allow users in different places to work concurrently on the same resource.

Any individual or organisation can **create and publish a website**. Most ISPs offer free Web space to their subscribers. (See the separate sheet in this pack on 'Setting up your own website!')





## Educational benefits of the Internet

Information and communications technology (ICT) projects run by the UK Education Departments have shown that the use of ICT in education provides a number of learning benefits, including:

- improved **subject learning** across a wide range of curriculum areas, including English, maths, science, history, geography, modern languages, art, technology, IT and careers, as well as independent study and cross-curricular project work
- improved **motivation** and attitudes to learning
- development of **independent learning and research skills**
- improved **vocational training**
- development of **network literacy** (i.e. the capacity to use electronic networks to access resources, create resources and communicate with others – these can be seen as complex extensions of the traditional skills of reading, writing, speaking and listening)
- **Social development.**

Through the Internet, students are able to 'visit' places and take part in events that would otherwise be too far away, or too costly. For example, the 24 Hour Museum enables visitors to take a virtual tour, the Hubble Space Telescope offers full-colour pictures of planets, while the Whole Brain Atlas gives access to colour MRI scan images of the entire brain. Other sites are specifically designed to support education in the UK, such as the National Grid for Learning (NGfL) which offers students, teachers and parents access to a growing collection of curriculum-related resources and educational support material, offering access to lifelong learning, basic skills and community information.

Learners have always needed to be able to find relevant and reliable information quickly and easily, and to select, interpret and evaluate what they find. Searching for information on the Web can help to develop these information skills. For example, the Web is an ideal way to introduce and illustrate concepts such as audience and purpose, authorship and bias. By viewing sites with opposing views, the idea of subjectivity/objectivity, fact/opinion and overt/covert bias can be demonstrated in an 'immediate' and powerful way.

## What should teachers and parents be aware of?

The Internet is a reflection of the people who make up our society. It is not controlled by any particular organisation and the standard or source of information cannot always be guaranteed. Individuals' rights to freedom of speech and freedom of choice must be observed, but balanced against the rights of younger users. Although not common, users will also wish to guard against the possibility of hacking and computer viruses.

While educators and parents need to exercise caution in the Internet access they allow students, they should not be deterred from using it. Its educational benefits outweigh any possible dangers. Schools have always helped learners to engage with society, based on clear support and guidance, and use of the Internet should be no exception.

As with television and video, parents, carers and educators should preview material or provide supervision, as well as having a more general strategy in place for ensuring children's safe use of the Internet. These strategies can use a combination of measures. Different circumstances call for different approaches so that young children can be protected from exposure to inappropriate material while older students may need no more than simple logging and monitoring. Some schools and colleges use an open service: they may supervise learners or make them earn their access. Some use an Internet service that filters material, while others also buy control or filtering software to monitor computer activity. Information on all of these strategies can be found in this pack.

One of the best ways for parents to become comfortable with their children's Internet access is to become actively involved. By learning to use the Internet alongside their children, parents can instil the values that they want their children to use when selecting material, not just on the Internet, but on television, radio, or in print.

## A sensible approach involves:

- siting computers in public places where everyone can see what is on the screen
- taking an interest in the Internet and regularly discussing what young people see and use
- being aware of what research projects children are carrying out on the Internet

- monitoring on-line time and being aware of excessive hours spent on the Internet
- educating students to use the Internet in a sensible and responsible manner
- encouraging learners to be critical users of the Internet: 'Is the information true? How do you know?'
- warning young people that there are some unsuitable sites on the Internet and discussing the issues involved
- warning young people that people may try to contact them in an inappropriate way and discussing the issues involved
- setting up a reporting system so that students know what to do if they find upsetting material
- requiring all learners to sign a code of conduct and, for those under 18, sending copies to parents for them to sign
- making it clear what the penalties are for misuse of the Internet
- ensuring that learners are aware that they must not respond to abusive messages.

**Website evaluation techniques** can also have an important role to play. Children should be encouraged to ask questions about a site, such as:

- **Authority**  
Who has written the information? What is the authority or expertise of the author? Are there contact details for the author? Who is the publisher of the site?
- **Purpose**  
What are the aims of the site? Does it achieve its aims?
- **Audience**  
Who is the site aimed at?
- **Relevance**  
Is the site relevant to me?
- **Objectivity**  
Is the information offered as fact or opinion? Is the information overtly or covertly biased?
- **Accuracy**  
Can the accuracy of the information be checked?
- **Currency**  
When was the information written? When was the site last updated?

- **Format**  
Does it contain information in the format that I want?
- **Links**  
Does the site give me advice/ideas/other choices?

## Sources of further information and advice

### **The British Computer Society Schools Committee and NAACE (National Association of Advisers for Computer Education)**

BCS and NAACE have produced a leaflet that presents the issues and suggests possible strategies for headteachers, governors, and ICT co-ordinators. Promoting the Responsible Use of the Internet in Schools considers education for responsible use as well as regulation to prevent misuse. There is an emphasis on schools writing their own Internet Acceptable Use Policies (AUPs). <http://www.bcs.org.uk/iap.html>

### **Childnet International**

Childnet (<http://www.childnet-int.org/>) offers advice to children, parents and teachers about the safe use of the Internet. It has specific sub-sites: <http://www.launchsite.org/english/index.html> which offers advice to children on how to surf safely and encourages them to use the Internet, and <http://www.netaware.org/> which is aimed at improving awareness generally.

### **Connecting Schools, Networking People 2000**

This publication is aimed at headteachers, governors and senior staff in primary and secondary schools. It is an authoritative and independent guide to ICT planning, purchasing and good practice for the National Grid for Learning and contains a section on controlling access to undesirable materials on the Internet. <http://vtc.ngfl.gov.uk/reference/publications/connecting/>

### **Family Guide Book**

This website is designed as a one-stop source of information for parents, teachers, librarians, and students who want to enjoy cyberspace safely. <http://www.familyguidebook.com/>

### **NCH Action for Children**

NCH Action for Children has produced information for parents including a set of guidelines for young people's Internet access: Children on the Internet: opportunities and hazards. <http://www.nchafc.org.uk/internet/index.html>



### The Parents' Information Network (PIN)

PIN has produced advice on the safe use of the Internet for families, which includes a safety code.

<http://www.pin.org.uk/learning/safeindx.htm>

### SafeKids.Com

A site that provides tips, advice and suggestions to make a family's on-line experience fun and productive. This site lays out the rules, the products and the issues. <http://www.safekids.com/>

### Student Safety on the Internet

This site offers a selection of articles, which put the issues into perspective. The issues are detailed and guidelines for parents are given. The benefits of the information highway are also stressed.

<http://www.4j.lane.edu/safety/>

### Scottish Executive

Information on Internet safety strategies for schools and local authorities, together with a resource pack for schools and families.

<http://www.scotland.gov.uk/clickthinking/>

### Tesco SchoolNet 2000

Tesco SchoolNet has produced guidance for teachers on the safe use of the Internet in schools and includes top ten tips for Web safety. <http://tesco.schoolnet2000.com/welcome/47.html>

## The following sites offer help with evaluating websites

Checklist of criteria for evaluating Web resources

Compiled by Susan Beck, Head of Humanities & Social Sciences Services Department, New Mexico State University Library.

<http://lib.nmsu.edu/instruction/evalcrit.html>

Five Criteria for Evaluating Web Pages

Created by Jim Kapoun, Reference and Instruction Librarian at Southwest State University.

<http://servercc.oakton.edu/~wittman/find/eval.htm>

The Internet Watch Foundation

The Internet Watch Foundation (IWF) aims to address the problem of illegal material on the Internet. Further details on this organisation are given in the 'Monitoring Organisations and Systems' sheet. <http://www.internetwatch.org.uk/>

The Quality Information Checklist

Produced by the Health Development Agency (HDA) and the Centre for Health Information Quality (CHIQ).

<http://www.quick.org.uk/menu.htm>

TEEM (Teachers Evaluating Educational Multimedia)

TEEM has produced frameworks for evaluating educational resources and content provided by teachers. Frameworks for evaluation can be downloaded and used locally.

<http://www.teem.org.uk/>

Web Resource Evaluation Techniques

Produced by Jan Alexander and Marsha Ann Tate, Wolfgram Memorial Library, Widener University, Chester, Pennsylvania.

Includes a ready-made PowerPoint presentation, free of copyright.

<http://www2.widener.edu/Wolfram-Memorial-Library/webeval/eval1198/index.htm>

## Further reading

Activities for using the Internet in primary schools, by Eta De Cicco, Mike Farmer and Claire Hargrave, Kogan Page, 1999.

ISBN: 0749429895.

Exploiting the Internet as an information resource in schools, by James Herring, Library Association Publishing, 1999.

ISBN: 1856042790.

From chalkboard to the Internet: the Internet starter's handbook, Becta, 1999. ISBN: 1853794325.

Internet for schools: a practical guide for teachers, parents and governors, by Barry Thomas and Rachel Williams, Internet Handbooks, 1999. ISBN: 1840253029.

Making the most of the NGfL: an introduction to the National Grid for Learning for primary teachers, Becta, 2000. Free publication. Contact [sales@becta.org.uk](mailto:sales@becta.org.uk)

Schools' guide to the Internet, by Peter McBride, Heinemann Educational, 1998. ISBN: 0435547143.

Using the Internet in secondary schools, Mike Farmer, James Hargrave and Eta De Cicco, Kogan Page, 1998.

ISBN: 0749425229.