



**Guidance**

Curriculum and  
Standards

**ICT teachers**

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# **Key Stage 3**

## *National Strategy*

### **Sample teaching unit for ICT: lessons**

**Year 8, unit 2**



### **Acknowledgements**

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## About the ICT sample teaching units for Key Stage 3

This unit is one of a series illustrating how objectives from the *Framework for teaching ICT capability: Years 7, 8 and 9* can be taught.

There is no requirement to use the units. They contain sample lesson plans that you can amend to suit your local circumstances and the needs of your pupils. For example, you may decide to use different activities to teach objectives or to teach the unit to a different year group. Microsoft Word versions of the lesson plans are being published on the Key Stage 3 website at [www.standards.dfes.gov.uk](http://www.standards.dfes.gov.uk) so that you can, if you wish, download the plans to modify them.

The units contain plans for lessons of 60 minutes. Each activity in the lessons has a guide time. This will help you to fit activities into lessons that are longer or shorter than 60 minutes. For example, the activities in one of the unit's lessons could be taught over two of your school's lessons, with extra starter and plenary activities added.

The ICT Framework recommends that schools offer one hour each week, or 38 hours per year, for discrete ICT lessons. The sample teaching units for a year, if taught without amendment, need less teaching time than 38 hours. This leaves time for lessons of your own design at suitable points. For example, you could revisit objectives to consolidate learning, use the time for informal assessment, or insert an extra skills-based lesson to teach particular aspects of more complex software.

The sample lesson plans are intentionally very detailed to give busy teachers a full picture of how each lesson might be taught. Teachers' own plans would probably be much less detailed.

The Year 8 lessons are designed mainly for pupils working at Level 5, with extension work for pupils who are more advanced. Adaptations and extra materials are suggested for less experienced pupils or for pupils working at lower levels.

The order in which the units for Year 8 are taught is not important.

### About sample teaching unit 8.2

This unit reviews pupils' learning from Year 7 and introduces some of the ICT Framework objectives for Year 8 in the theme 'Exchanging and sharing information'. In this unit, pupils plan and design a website, taking account of the users' particular interests and needs. The lessons focus on the knowledge, skills and understanding of refining and presenting information and recognising fitness for purpose.

Web technology changes rapidly. This unit is in line with current recommendations of the World Wide Web Consortium (W3C) (see <http://www.w3.org/>).

Microsoft FrontPage Express has been used in this unit to illustrate the general principles of web page construction. It can no longer be downloaded from the Internet but is widely available in schools and is on the installation CD for Microsoft Office 2000 and Microsoft Office XP. There are many other suitable web page authoring applications. If you do not have access to FrontPage Express, read through these materials and modify them for your chosen application. You may wish to discuss your choice of application with your LEA's ICT consultant.

## Publishing on the web

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Fitness for purpose

- Understand that an effective presentation or publication will address audience expectations and needs.
- Devise criteria to evaluate the effectiveness of own and others' publications and presentations, and use the criteria to make refinements.

##### Refining and presenting information

- Plan and design presentations and publications, showing how account has been taken of:
  - audience expectations and needs;
  - the ICT and media facilities available.
- Use a range of ICT tools efficiently to combine, refine and present information by:
  - extracting, combining and modifying relevant information for specific purposes;
  - structuring a publication or presentation.

##### Communicating

- Understand some of the technical issues involved in efficient electronic communications.
- Use ICT effectively to adapt material for publication to wider or remote audiences.

#### DEVELOPING IDEAS AND MAKING THINGS HAPPEN

##### Analysing and automating processes

- Automate simple processes by creating simple software routines.
- Consider the benefits and drawbacks of using ICT to automate processes.
- Represent simple design specifications as diagrams.

### Timing

Sample teaching unit 8.2 is expected to take eight lessons of 60 minutes. Each activity has a guide time so that you can alter the number and duration of lessons to suit your own timetable.

## Task

In this unit pupils use web technology to design and create a website for a 'virtual' visit to a school. Groups of four pupils design and implement a sequence of linked web pages. Over the eight lessons, pupils should develop sufficient understanding of web technology to create and evaluate an efficient and effective website design. You will need to help pupils to understand that web browsers display web pages in different ways and remind them to take account of this when they are creating their websites.

The example of a website used in this unit is a 'virtual' visit to a school but you could, if you wish, substitute any other topic that enables the same learning objectives to be achieved.

A range of applications can be used to create web pages and websites. To exemplify the process, this unit uses a basic package, Microsoft FrontPage Express, referred to throughout as FrontPage Express.

Some sample files are included on the CD-ROM for this unit, to allow you to explore this software and prepare for the lessons. These files are school.htm, a sample web page for Internet Explorer, hswanim2.gif, a sample logo, and four style sheets: one.css, two.css, three.css, four.css.

Most schools will want to adapt the lessons and resources in this unit for their own web authoring package. The best web authoring packages for use in schools enable pupils to develop their ICT capability without having to master sophisticated techniques.

## Website references

Websites referred to in these materials existed at the time of going to print. Owners of websites may make unexpected changes to their sites for various reasons, or may allow their sites to fall out of date. You should check all website references carefully to see if they are still relevant, or if they have changed, and substitute other references where appropriate.

## Resources

- Computer and large display
- Several computers equipped with sound cards
- Internet and intranet access, with an Internet browser for you, accessible to pupils on the network
- Software, such as Microsoft Office, for wordprocessing and presentations
- A wordprocessing package capable of saving files as web pages in HTML (for example, Microsoft Word), and Notepad, for creating text files
- Web page creation software (this unit is based on a basic package, FrontPage Express – see the note on page 4)
- A graphics animation package with web function (optional)
- Image editing software
- Digital cameras
- Scanner

- Printer
- Whiteboard or flipchart
- Pads of yellow sticky notes
- A3 paper
- Squared paper
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 1.ppt, *A slide presentation for lesson 1*
  - Teacher resource 2.ppt, *A slide presentation for lesson 2*
  - Teacher resource 3.ppt, *A slide presentation for lesson 3*
  - Teacher resource 4.ppt, *A slide presentation for lesson 4*
  - Teacher resource 5.ppt, *A guide to using FrontPage Express*
  - Teacher resource 6.ppt, *A slide presentation for lesson 5*
  - Teacher resource 7.ppt, *A slide presentation for lesson 6*
  - Teacher resource 8.ppt, *A slide presentation for lesson 7*
  - Teacher resource 9.ppt, *A slide presentation for lesson 8*
  - 8.2 homework tasks.pdf, *Homework tasks*
  - 8.2 vocab cards.pdf, *Flash cards of the key vocabulary used in this unit*
  - hswanim2.gif, *A sample logo*
  - school.htm, *A sample web page*
  - one.css, *Sample style sheet 1*
  - two.css, *Sample style sheet 2*
  - three.css, *Sample style sheet 3*
  - four.css, *Sample style sheet 4*
- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 1.ppt, *A guide to HTML (PowerPoint presentation)*
  - Pupil resource 2.pdf, *A guide to HTML*
  - Pupil resource 3.ppt, *A guide to using Microsoft Word to create a web page (PowerPoint presentation)*
  - Pupil resource 4.pdf, *Using Microsoft Word to create a web page*
  - Pupil resource 5.pdf, *Three page layouts*
  - Pupil resource 6.pdf, *Using style sheets*
  - Pupil resource 7.ppt, *Web pages*
  - Pupil resource 8.ppt, *More web pages*
  - Pupil resource 9.pdf, *A worksheet: Evaluating web pages*
  - Pupil resource 10.pdf, *Key vocabulary sorting cards*

## Prior learning

Pupils should already know how to:

- use a wordprocessor, including editing, moving, copying and pasting text and pictures, and changing fonts;
- apply the properties of different graphics formats;
- use storyboard techniques to design a publication;
- use an Internet browser, connect to an Internet site by using its URL and navigate around the site;
- use a search engine to make selective searches, with due attention to copyright restrictions;
- apply the rules and procedures related to the school's Internet access policy.

## Subject knowledge needed by teachers

To teach this unit, teachers will need to know how to:

- use the Internet to access information and make selective searches, with due attention to copyright restrictions;
- use diagrams to plan the structure of a site;
- explain the principles of:
  - HTML, a text mark-up language;
  - broadband communications and transmission rates;
- use presentation and wordprocessing software, desktop publishing software and a web authoring package;
- create and use style sheets;
- work with different graphics formats, and work with a graphics animation package with web function;
- use a web authoring package, or a wordprocessing or desktop publishing package with web capabilities, to design web pages and websites.

If you need help with the ICT terms associated with this unit, you could refer to an online dictionary (e.g. <http://wombat.doc.ic.ac.uk/foldoc/>).

## Lesson outlines

### LESSON 1

#### Introducing the unit and a text mark-up language, HTML

- 1 Starter: Reviewing Year 7 learning
  - 2 Introducing the unit
  - 3 Introducing HTML
  - 4 Creating a simple web page in HTML
  - 5 Plenary: Planning extra features
- Homework: Planning the home page of a website

## LESSON 2

### Comparing methods of producing web pages

- 1 Starter: Relationship between audience and purpose
  - 2 Using Microsoft Word to create a web page
  - 3 Comparing methods of producing web pages
  - 4 Plenary: Looking forward
- Homework: Evaluating the use of a wordprocessor to create a web page

## LESSON 3

### Planning the website structure

- 1 Starter: Considering audience needs
  - 2 Outlining the structure
  - 3 Identifying routes through the information
  - 4 File and folder structure
  - 5 Plenary: Reviewing the plan for the website structure
- Homework: Researching users' needs and interests

## LESSON 4

### Introducing web page creation, structure and appearance

- 1 Starter: Thinking about page layouts
  - 2 Demonstrating the web page creation software
  - 3 Style sheets
  - 4 Plenary: Advantages of style sheets
- Homework: Finding images for the section of the website

## LESSON 5

### Designing and creating a front page for a section

- 1 Starter: Evaluating web pages
  - 2 Planning the design of the front page of the section
  - 3 Creating the front page
  - 4 Plenary: Evaluating the pages produced
- Homework: Suggestions for improving the page

## LESSON 6

### Designing web pages

- 1 Starter: Considering the purposes of websites
  - 2 Planning and designing pages for the section
  - 3 Plenary: Sharing examples
- Homework: Drafting the text for a page

## **LESSON 7**

### **Creating more web pages**

- 1 Starter: Reviewing home pages and the use of links
  - 2 Creating the pages
  - 3 Plenary: Sharing examples
- Homework: Reviewing the pages

## **LESSON 8**

### **Completing and evaluating the project**

- 1 Starter: Revising definitions of key vocabulary
  - 2 Completing the pages and creating the website
  - 3 Plenary: Evaluating the unit
- Homework: Setting personal targets

## Introducing the unit and a text mark-up language, HTML

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Fitness for purpose

- Understand that an effective presentation or publication will address audience expectations and needs.
- Devise criteria to evaluate the effectiveness of own and others' publications and presentations.

##### Refining and presenting information

- Use a range of ICT tools efficiently to combine, refine and present information by:
  - structuring a publication or presentation.

### Key vocabulary

**From Year 6:** accurate, drop-down menu, font, font size, heading, home page, index, Internet, web page, website

**From Year 7:** criteria, file extension, fit for purpose, search engine, uniform resource locator (URL), web browser, body text, layout, readability, structure, subheading

**From Year 8:** authentic, bias, hypertext mark-up language (HTML), hyperlink, navigate, tags

### Preparation and planning

#### Preparation for the unit

- Clarify from pupils' records and your scheme of work the types of information handling activities they experienced in Year 7.
- Plan the groups of four pupils for the main task for the unit, taking account of pupils' prior learning and experience, their technical capabilities and ability to work collaboratively. You will also need to consider how you will support pupils during independent activities. For example, if you plan to put two or more groups together for additional support at any point (while other pupils continue working), you will need to group together pupils with similar learning needs. Alternatively, you can organise mixed-ability groups to enable pupils to help each other.
- Make sure that there is enough storage capacity on the school's intranet or website for the work that is about to be done. Create folders for pupils to store the pages that they create. Check the folder structure and ensure that permissions for access are correct.

- Create a wall display of key vocabulary for the unit, which can be added to each week. If you wish, you could create a complete set of vocabulary cards from the file 8.2 vocab cards.pdf.
- Identify whether a technician or other staff could be available for the lessons that involve intensive practical work (lessons 1, 2, 4, 5 and 7). If so, brief them about this unit.

### Preparation for the lesson

- Familiarise yourself with Teacher resource 1.ppt.
- Copy Pupil resource 1.ppt, *A guide to HTML*, to the shared area of the network.
- Print copies of Pupil resource 2.pdf, *A guide to HTML*, one per pair of pupils (optional).
- Use 8.2 homework tasks.pdf to prepare copies of the homework task for this lesson, one per pupil.
- Shortly before the lesson, check that any websites that you intend to use are still available. If necessary, substitute alternatives.
- Load Teacher resource 1.ppt, *A slide presentation for lesson 1*, ready to show on the large display.

### Resources

- Computer and large display
- Internet and intranet access, with an Internet browser for you and accessible by pupils on the network
- Software, such as Microsoft Office, for wordprocessing and presentations, and Notepad, for creating text files
- Printer
- Whiteboard or flipchart
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 1.ppt, *A slide presentation for lesson 1*
  - 8.2 vocab cards.pdf, *Flash cards of the key vocabulary used in this unit*
- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 1.ppt, *A guide to HTML (PowerPoint presentation)*
  - Pupil resource 2.pdf, *A guide to HTML*

### Lesson outline

**60 minutes**

<b>1</b>	<b>Starter: Reviewing Year 7 learning</b>	Small-group activity Whole-class discussion	15 minutes
<b>2</b>	<b>Introducing the unit</b>	Whole-class discussion	5 minutes
<b>3</b>	<b>Introducing HTML</b>	Demonstration	15 minutes
<b>4</b>	<b>Creating a simple web page in HTML</b>	Paired activity	15 minutes
<b>5</b>	<b>Plenary: Planning extra features</b>	Whole-class discussion	10 minutes
	<b>Homework: Planning the home page of a website</b>	Individual work	

# Activities

Before the start of the lesson:

- if you have not already done so, load **Teacher resource 1.ppt**, ready to show on the large display;
- use your Internet browser to access [www.bbc.co.uk](http://www.bbc.co.uk) on the large display;
- write on the flipchart:

What criteria do you use to judge a website's:

- accuracy and validity
- ease of use
- relevance
- quality of display?

(Alternatively, prepare the questions on cards, differentiating the questions to meet the needs and abilities of pupils in different groups.)

15 minutes

## 1 Starter: Reviewing Year 7 learning

As pupils come into the room, refer them to the questions on the flipchart or on the prepared cards.

Allow a few minutes for discussion, then go through the questions below, taking feedback. As appropriate, refer to the web page you have displayed on the screen.

- What criteria do you use to judge a website's **accuracy** and **validity**?  
*Is the source reliable ('official' or 'unofficial')?*  
*Does the site have links to other reliable websites, and is the information backed up by similar information from other websites?*  
*Is the information fact or opinion?*  
*Is the information biased or misleading in any way?*  
*Is the information complete or incomplete, giving the whole picture, or just part of the story?*  
*Is the information up to date?*  
*Is the information clear?*
- What criteria help you to judge whether a website is **easy to use**?  
*Are the language and vocabulary easy to understand?*  
*Is it easy to navigate the site and find your way around it?*  
*Are options clear? Do menus and internal links help you to find the information that you want?*
- How do you judge the **relevance** of a website?  
*Does it meet the needs of all the categories of people who might want the information?*
- What criteria help you to judge a website's **quality of display**?  
*Is it legible, is the font size appropriate for the users?*  
*Is it attractive to the user in its layout and use of colour?*  
*Do the graphics, sound and animation add to the relevance or attractiveness of the site, or do they distract the user?*

In discussion, remind pupils about these points from Year 7 lessons.

- A site such as [www.bbc.co.uk](http://www.bbc.co.uk), with links to changing information, such as current news, the weather, financial information, is more likely to be up to date.
- A more recent website is not automatically more accurate than an older one. The older one may contain correct information, the more recent text could be inaccurate or biased in some way.

- Factual data such as measurements of temperature may superficially appear to be accurate but may be biased because the sample of measurements was not representative. Information in an advertisement may be biased because it does not show the whole picture or because it represents a particular viewpoint.
- The relevance of a website has to be judged, taking account of who is using it and for what purpose. A site about a place of interest might be relevant to a researcher who is looking for historical facts but not to a tourist who wants to know whether it is open on Sundays.
- The style of presentation (layout, use of sound and colour) cannot on its own be taken as an indicator of whether or not a site is reliable, since a particular style is easy to mimic.

During the discussion, try to use the key terms associated with web pages (*for example, web browsers, hyperlinks, World Wide Web*). Point out the wall display of vocabulary and tell pupils that you will be adding to it as the unit progresses.

5 minutes

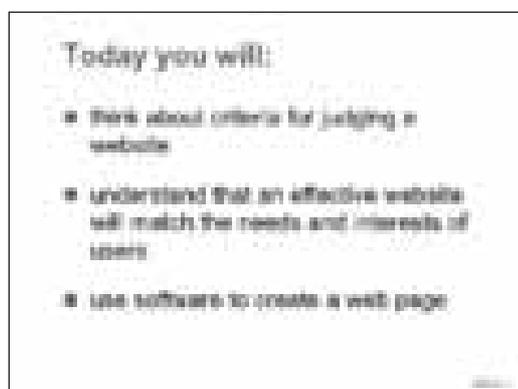
## 2 Introducing the unit

Explain to the class that during this unit of eight lessons they will learn to:

- recognise effective and efficient features of websites;
- judge a website's 'fitness for purpose';
- create several linked web pages to be displayed on the school intranet or website;
- use a range of software to enable them to complete their task.

Explain that in this lesson pupils will be introduced to the way in which web pages are designed. Show **slide 1** from Teacher resource 1.ppt to explain the lesson's objectives.

### Slide 1



Tell pupils that they are going to create a website displaying an on-screen 'visit' to the school. The audience may vary but could include parents, pupils and general visitors, who will be able to find out about:

- various parts of the school, with areas to view on-screen;
- the staff and pupils who work there;
- particular subjects;
- extra-curricular activities;
- clubs and societies.

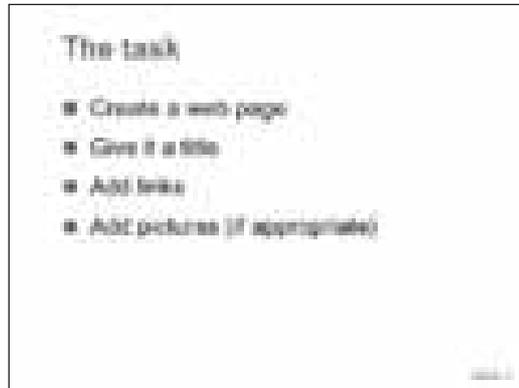
Tell pupils that later they will be working in groups of four for some of the unit. Tell pupils which groups they will be in.

### 3 Introducing HTML

Explain to the class that the purpose of the next activity is to help them to understand how web pages are constructed.

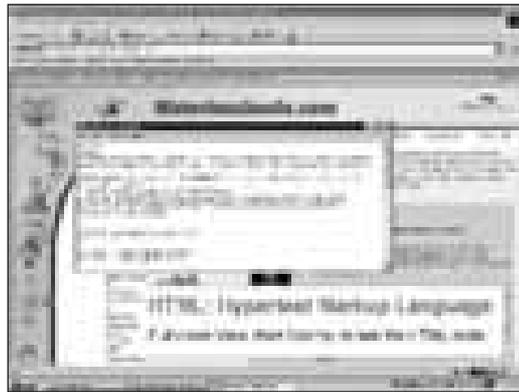
Show **slides 2 to 9** of Teacher resource 1.ppt to demonstrate how to create a web page.

#### Slide 2



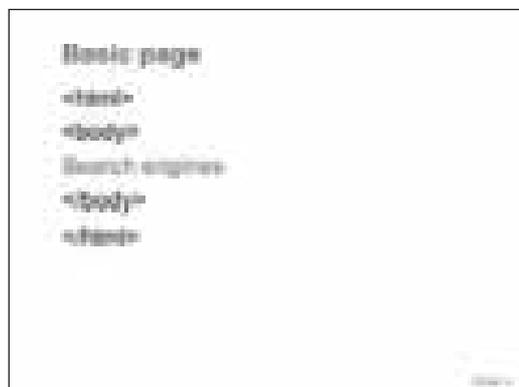
Say that **slide 2** explains the task, to create a web page with these features.

#### Slide 3



Tell the class that they will be using HyperText Mark-up Language, known as HTML. They can see an example of this if they pull down the View menu of a web page and choose Source. Explain that, although HTML appears to be complex, it has a simple underlying structure that they will learn to use. It is an example of what is called a *text mark-up language*.

#### Slide 4

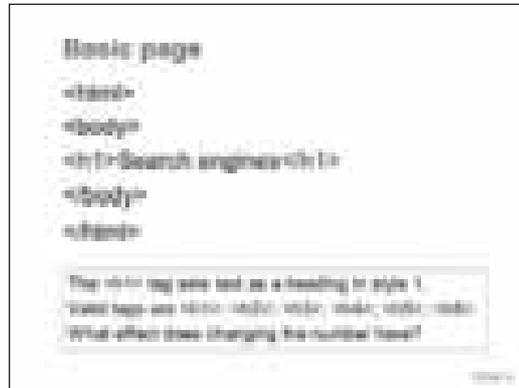


This slide shows how to use HTML to put the phrase 'Search engines' on a web page.

A basic HTML web page is a text file that contains special markers. The web browser interprets these markers in a particular way to display the text or the pictures on the web page. The markers are called *tags* and they are indicated by the use of < and >.

Tags almost always work in pairs. There will be a starting tag <HTML> and a finishing tag </HTML>. In between <BODY> and </BODY> tags will indicate where the main part of the text begins and ends.

### Slide 5



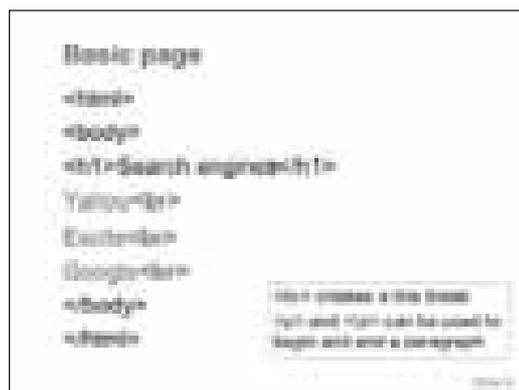
A variety of other tags can be used to highlight pieces of text: <H1> and </H1> are placed around the heading text to indicate that it is a heading.

The number after H indicates the relative importance of the heading, so the tag <H1> indicates that the style should be larger and more important than a heading tagged <H2>. Ask:

- What do you think the tags for bold would be?  
<B> </B>
- And the tags for Italic?  
<I> </I>

Stress that the pairs of tags always surround the item or text they describe.

### Slide 6

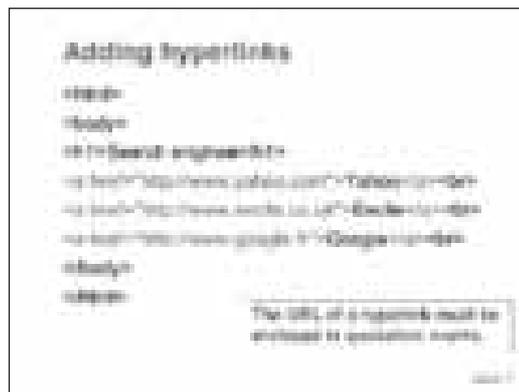


To add ordinary text, type in the required text. If you press the RETURN key, the web browser will ignore it. This is a text mark-up language: you must use the language's code to indicate exactly what must be done.

The <br> tag is used to create a break in the line. This is one of the very few tags that is used on its own.

<P> and </P> can be used to begin and end a paragraph.

## Slide 7



A *hyperlink* (a link to another place) can be added in a similar way, with a pair of tags: `<a href... >` and `</a>`. Text describing the hyperlink can be put between the `<a>` and `</a>` tags. The tag `<a href ... >` includes a reference to the required URL. This reference must be in quotation marks and preceded by an equals (=) sign.

When the web page is displayed, the browser will underline the text to show that it is a link. The cursor will change to a hand when it passes over the reference. Clicking on the link will take the user to the new page.

Ask pupils:

- Why do you seldom see underlined headings on web pages?  
*Because underlining indicates a hyperlink.*

## Slide 8



The title is a special piece of text that can be used in two ways. First, a search engine will look at the title to find the content of the page and use this information to index it. Second, the title is displayed in the top bar of the web browser to indicate the content. It isn't essential but it is regarded as good practice to include it.

Stress that the `<HEAD> ... </HEAD>` section goes before the `<BODY>` tag. Anything here is seen by the browser but is not displayed. It is used to place coding about the style and format of the page (for example, style sheets and JavaScript).

## Slide 9

Creating the HTML file

- The text file can be created in a simple text editor such as Notepad.
- The file name must have .htm at the end to indicate that it is a web page.
- The file contains instructions to the web browser which describe how the page should look.

The HTML file for a web page can be constructed in Notepad. It must be saved with a *file name extension* of .htm to indicate that it is a web page. This type of file differs from other text files in that the page is described according to certain attributes. It is an example of a *text mark-up file*: the instructions to the web browser describe the content of the page and how it should be displayed.

15 minutes

## 4 Creating a simple web page in HTML

Tell pupils that **Pupil resource 1.ppt**, *A guide to HTML*, is available as a PowerPoint presentation in the shared area of the network. If you wish, hand out copies of **Pupil resource 2**, *A guide to HTML*, one per pair of pupils.

Ask pupils to work in pairs, using Notepad (or a similar text editor) to create a simple web page. Their page should be the same as the one that you have created, with at least one heading, some body text and a hyperlink.

Remind the pairs to save the file with the file extension '.htm'. The file name should be in lower case, with no more than eight letters or numbers, and no spaces. Ask pupils to use their web browser to view their page and to check that their file is saved correctly.

10 minutes

## 5 Plenary: Planning extra features

Bring the whole class together. Remind pupils that the main purpose of a web page is to communicate. They should always consider the needs and priorities of their audience. Show slide 10 of Teacher resource 1.ppt to stress again the criteria for judging a website that they identified at the start of the lesson.

### Slide 10

Judging a website

- Is the information relevant to the users?
- Is it clear, up to date, accurate and unbiased?
- Do the images enhance, not distract? Are they meaningful? Is the text size suitable?
- Is the site easy to use and to navigate?

Ask pupils to think for a couple of minutes about the questions on slide 10 in relation to the web page they have developed. Then ask:

- What extra features would you add to your web page if you had more time to work on it?

Discuss possible additions, such as colour, pictures and animations. Remind pupils of the advantages and disadvantages of animations, and of scrolling up and down the site as opposed to use of dropdown menus and rollover menus.

Refer pupils back to the objectives of the lesson and some of the vocabulary that they have used. Tell them that in this lesson they used HTML to create a very simple web page. Ask:

- What did you find difficult about the task?

The likely answer will be that they found it difficult to get the *syntax* right. Say that everyone finds this difficult when they start to use a new computer language but that it gets easier with experience.

Tell pupils that in their next lesson they will use a standard wordprocessor to create a web page.

### Homework: Planning the home page of a website

Set this task.

#### Planning a home page

Make a list of the types of information you think should be on the home page of the school's website.

For each item, say why you think it is important.

## Comparing methods of producing web pages

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Refining and presenting information

- Use a range of ICT tools efficiently to combine, refine and present information by:
  - structuring a publication or presentation.

##### Communicating

- Understand some of the technical issues involved in efficient electronic communications.

### Key vocabulary

**From Year 6:** digital, download

**From Year 7:** analogue, dial-up, efficient

**From Year 8:** bandwidth, file size, style sheet, transmission speed

**From Year 9:** Integrated Services Digital Network (ISDN)

**Other:** broadband, modem, Public Switched Telephone Network (PSTN), Plain Old Telephone System (POTS)

### Preparation and planning

- You may want to make a poster for this lesson to show the difference between dial-up (PSTN, ISDN) and broadband (cable, satellite).

The Public Switched Telephone Network (**PSTN**) is the set of interconnected systems operated by the various telephone companies around the world. It is also known as the Plain Old Telephone System (**POTS**). It is now almost all digital, except for the final connection to the subscriber (the 'last mile').

Over ordinary dial-up accounts information can be transferred at the speed of your modem, usually 56 kilobytes per second (kb/s). In practice, the transmission rate varies and it is often slower than this. The path for data from your computer to the Internet is:

- digital data in your computer;
- to a modem in or attached to your computer;
- to analogue data in telephone phone wires;
- to a modem at the Internet Service Provider (ISP);
- to digital data on Internet servers.

**ISDN** stands for Integrated Services Digital Network. The ISDN transfer rate is normally 64 kb/s. You can choose to use 'two pipes' so that the rate doubles to 128 kb/s.

**Broadband** can carry several independent signals at once, transmitting them both ways at a much higher rate, at least 500 kb/s. Many people regard 2Mb/s as the minimum for broadband connection.

A free online dictionary (e.g. <http://wombat.doc.ic.ac.uk/foldoc/>) will give you more help with the terms. You can also find information about broadband and other technical matters on BECTA's website, [www.becta.org.uk/technology/infosheets/pdf/telecoms.pdf](http://www.becta.org.uk/technology/infosheets/pdf/telecoms.pdf).

### Preparation for the lesson

- Plan specific themes that can be allocated to each group of four pupils during the plenary of this lesson. This will be the start of the main task for the unit: creating a website to show a 'virtual' visit to a school. Themes could include information about National Curriculum subjects, extra-curricular activities, how to find various areas of the school, the systems for pupil support, school rules and regulations, and so on.
- Familiarise yourself with Teacher resource 2.ppt.
- Brief any support staff who are available to help in the lesson.
- Copy Pupil resource 3.ppt, *A guide to using Microsoft Word to create a web page*, to the shared area of the network so that pupils can use it.
- Make copies of Pupil resource 4.pdf, *Using Microsoft Word to create a web page*, one per pair of pupils (optional).
- Add new vocabulary to the wall display.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task for this lesson, one per pupil.
- Shortly before the lesson, check that any websites that you intend to use are still available. If necessary, substitute alternatives.
- Load Teacher resource 2.ppt, *A slide presentation for lesson 2*, ready to show on the large display.

### Resources

- Computer and large display
- Internet and intranet access, with an Internet browser for you, accessible to pupils on the network
- Software for presentations
- A wordprocessing package capable of saving files as web pages in HTML (for example, Microsoft Word), and Notepad, for creating text files
- Printer
- Whiteboard or flipchart
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 2.ppt, *A slide presentation for lesson 2*
  - 8.2 vocab cards.pdf, *Flash cards of the key vocabulary used in this unit*

- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 3.ppt, *A guide to using Microsoft Word to create a web page (PowerPoint presentation)*
  - Pupil resource 4.pdf, *Using Microsoft Word to create a web page*

## Lesson outline

**60 minutes**

<b>1</b>	<b>Starter: Relationship between audience and purpose</b>	Paired activity Whole-class discussion	10 minutes
<b>2</b>	<b>Using Microsoft Word to create a web page</b>	Demonstration Paired activity	25 minutes
<b>3</b>	<b>Comparing methods of producing web pages</b>	Whole-class discussion Paired discussion	15 minutes
<b>4</b>	<b>Plenary: Looking forward</b>	Whole-class discussion	10 minutes
	<b>Homework: Evaluating the use of a wordprocessor to create a web page</b>	Individual work	

# Activities

Before the start of the lesson:

- load [www.bbc.co.uk/cbeebies](http://www.bbc.co.uk/cbeebies) onto the network;
- if you have not already done so, load **Teacher resource 2.ppt**, ready to show on the large display;
- write on the flipchart:

audience  
purpose  
special features

10 minutes

## 1 Starter: Relationship between audience and purpose

Remind pupils that websites have different purposes. Some websites are there to inform, some to entertain, some to advertise or sell, some to promote or publicise a viewpoint.

Ask pupils to spend a few minutes, in pairs, looking at the website [www.bbc.co.uk/cbeebies](http://www.bbc.co.uk/cbeebies). Tell them to consider three things as they view the site: the audience for the website, its purpose and its special features. Refer them to the reminders on the flipchart.

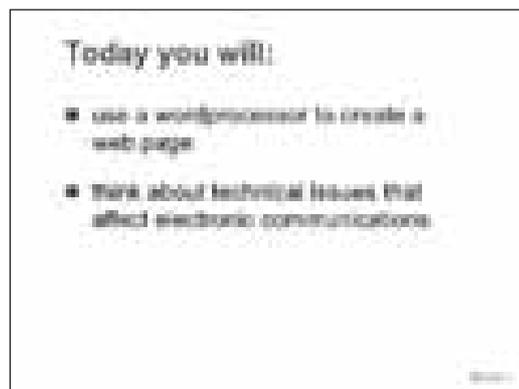
Eavesdrop while pupils are working. After 4 to 5 minutes, choose some pairs to explain and to justify their answers. Ask:

- Who is the audience for this website? Why do you think that?  
*Under 5s or 5-to-11-year-olds.*
- What is the purpose of this website? Why do you think that?  
*To entertain, or inform.*
- What special features are used to help the audience?  
*Images, speech.*

Explain that during the next 6 weeks pupils will need to be aware of the audience and purpose. In this lesson they will recreate the same web page as they did in their last lesson, but this time using wordprocessing software. They will also start to think about some of the technical issues associated with web page design.

Show **slide 1** from Teacher resource 2.ppt to explain the objectives for this lesson. Refer to the new vocabulary in the wall display, reminding them that they will know many of the words from their work in Year 7.

### Slide 1



## 2 Using Microsoft Word to create a web page

Explain that web pages all use an underlying structure of HTML but that different applications can be used to create this structure. Remind the class that in their last lesson they used HTML to create a very simple page. They typed the HTML tags themselves. It was not a very easy way to create something that was really very simple.

In this lesson, they will look at a different way to do the same thing, this time using wordprocessing software (for example, Microsoft Word). When they have completed the task, they will compare the efficiency of the two methods.

Show **slides 2 to 8** of Teacher resource 2.ppt to demonstrate how to use Microsoft Word to create a web page.

### Slide 2



Say that the first task is to load Microsoft Word and a blank page, and to type in the text for the page. In this demonstration, the page will be the same as in the previous lesson, with some information on search engines.

### Slide 3



To create the heading, highlight the first row of the text (Search engines) and use the style menu to make it Heading 1 (as in the HTML lesson).

Explain that the definition of styles is a key idea in both Microsoft Word and HTML pages.

In HTML an `<H1>` tag is always heading 1, but the actual display font (for example Times New Roman, font size 20pt, bold) is determined separately by telling the browser how to display H1. The fonts the browser should use can be specified in the HTML itself, but they are often defined in a separate file (a *style sheet*). Then the final details of appearance do not need to be specified on every web page, and changes to all the pages can easily be made later by changing the style sheet.



Tell pupils that **Pupil resource 3.ppt**, *A guide to using Microsoft Word to create a web page (PowerPoint presentation)*, is available in the shared area of the network. If you wish, hand out copies of **Pupil resource 4**, *Using Microsoft Word to create a web page*, one to each pair of pupils.

Ask pupils to work in pairs, to create the same page as they did in the previous lesson and to save their web page using a different file name from their HTML page. Allow about 15 minutes for the task.

Pupils who finish quickly could extend their text and then experiment with styles. For example, they could add:

- a hyperlink to the BBC website and to the school website;
- a sentence about the BBC site;
- a sentence about the school website.

Any extra details should be saved with a different file name.

15 minutes

### 3 Comparing methods of producing web pages

Gather the attention of the whole class. Set pupils a question to discuss in their pairs. Allow 2 to 3 minutes of discussion, then take feedback.

- Compared with typing HTML yourself, how does using Microsoft Word make it easier to create web pages?

*More automated features, e.g. instructions on formatting can be given by highlighting text and selecting a style from a dropdown menu, rather than typing them all in one by one);  
the ability to browse for URLs;  
other menu driven features.*

Show the class how to check the size of a particular file when it is loaded into the web browser. (In the browser, right-click and select Properties. The file size is among the properties displayed.)

Ask the pairs to compare the sizes of their two files: the one they created using HTML and the similar one they created using Microsoft Word, for example, HTML file = 264 bytes, Microsoft Word file = 3699 bytes. Ask:

- What do you notice?  
*The file produced with Word is much larger.*

Ask them to view the source code of each of their files. (With a file loaded into the browser, select View, then Source). Ask:

- Why is your Word file larger?  
*The Microsoft Word document has added a lot more coding and other information to the basic HTML.*

Tell pupils that not all web browsers can understand the extra coding.

Ask pupils, still in their pairs, to join with another pair to form groups of four. Ask the groups to discuss a series of questions, giving the questions one by one. Take feedback on each question after 2 to 3 minutes of discussion by the pupils.

- What difference could the file size make to a user?  
*For users with dial-up Internet access, page changes for larger files would be much slower and therefore there would be higher telephone charges. It would also take longer to download a page.  
The same would be true for users with broadband Internet access, although the difference will be less noticeable.*

- When might it be appropriate to use Microsoft Word to produce web pages?  
*Web pages produced with Word are suitable for an intranet, an internal web-based information service that is run within a school, office or building, and which does not depend on an outside telephone connection; web pages produced with Word could be appropriate if you are certain of the audience (for example, when you are preparing a page for a closed website), and you are aware of the facilities available to the users (for example, the specification of computers and the bandwidth available).*
- When might it be appropriate to use pure HTML to produce web pages?  
*If you are designing web pages for the Internet, it is generally more effective to use pure HTML, since you have no control over who will view the page and what kinds of connection, browser or setting they may use.*

Remind pupils that, as with the contents of web pages, the needs of the users are the main consideration.

10 minutes

#### 4 Plenary: Looking forward

Refer pupils back to the objectives for this lesson and remind them of the key vocabulary and technical terms used in the lesson. If you have made a poster on transmission rates, refer to it now. Tell pupils they can find more information about this on the Internet, for example, on BECTA's website [www.becta.org.uk](http://www.becta.org.uk).

Conclude by giving pupils a brief preview of their task for the remaining lessons. Explain that they will construct an intranet or a website that will display a 'virtual' visit to the school (depending on which option you have already chosen). Discuss the homework from the previous lesson, identifying items of interest for a home page for the website.

Remind pupils about the groups in which they will work. Allocate the specific task you have planned for each group. Tasks could include a different area of school life for each group, such as National Curriculum subjects, extra-curricular activities, how to find various areas of the school, pupil support systems or the location of parts of the school.

#### Homework: Evaluating the use of a wordprocessor to create a web page

Set this task.

##### Using a wordprocessor to create a web page

Make notes about the advantages and disadvantages of using a wordprocessor to create a website about our school.

Remember that the website will be used by pupils, staff and governors, by parents and by people visiting the school.

## Planning the website structure

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Refining and presenting information

- Plan and design presentations and publications, showing how account has been taken of:
  - audience expectations and needs;
  - the ICT and media facilities available.

#### DEVELOPING IDEAS AND MAKING THINGS HAPPEN

##### Analysing and automating processes

- Represent simple design specifications as diagrams.

### Key vocabulary

**From Year 8:** hierarchy, hypertext

**Other:** linear, web schema

### Preparation and planning

- Adapt Teacher resource 3.ppt to reflect your own school's website.
- Add new vocabulary to the wall display.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task, one per pupil.
- Load Teacher resource 3.ppt, *A slide presentation for lesson 3*, ready to show on the large display.

### Resources

- Computer and large display
- Software, such as Microsoft Office, for wordprocessing and presentations
- Printer
- Whiteboard or flipchart
- Pads of yellow sticky notes
- A3 paper
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 3.ppt, *A slide presentation for lesson 3*
  - 8.2 vocab cards.pdf, *Flash cards of the key vocabulary used in this unit*

## Lesson outline

**60 minutes**

1	<b>Starter: Considering audience needs</b>	Whole-class demonstration Group activity	15 minutes
2	<b>Outlining the structure</b>	Whole-class discussion	10 minutes
3	<b>Identifying routes through the information</b>	Group activity	15 minutes
4	<b>File and folder structure</b>	Whole class Demonstration and discussion	10 minutes
5	<b>Plenary: Reviewing the plan for the website structure</b>	Pupil presentations Whole-class discussion	10 minutes
	<b>Homework: Researching users' needs and interests</b>	Individual work	

# Activities

Before the start of the lesson:

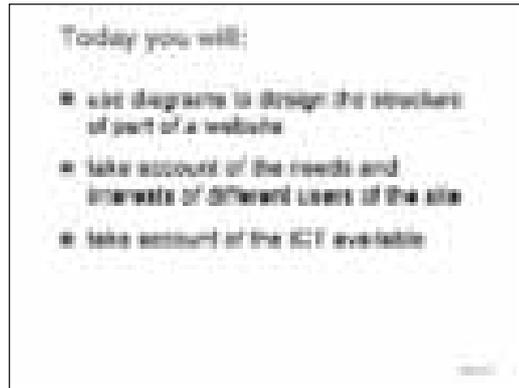
- put out A3 paper and pads of yellow sticky notes for each group for activity 3;
- if you have not already done so, load **Teacher resource 3.ppt**, ready to show on the large display.

15 minutes

## 1 Starter: Considering audience needs

Tell pupils that in this lesson they will design a part of a website. Show **slide 1** from Teacher resource 3.ppt to explain the lesson's objectives.

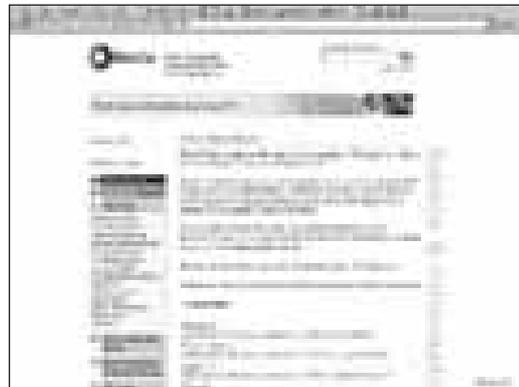
### Slide 1



Give pupils brief feedback on their homework from the previous lesson: the advantages and disadvantages of using a wordprocessor to create a web page. Say that there are certain technical ways in which users can help themselves to use a web page and other ways in which web page designers can help their users.

Show **slides 2 to 6** of Teacher resource 3.ppt to illustrate this.

### Slide 2



Slide 2 shows the BECTa website as seen in Microsoft Internet Explorer 6. The screen resolution is 1024 by 768 pixels. Point out the white space on the left and the right. The page has been designed for a lower screen resolution of 640 by 480. The page has been designed so that any viewer, no matter what computer and Internet browser they are using, can see it.

### Slide 3



Slide 3 shows the same page but the user has turned off 'fonts and font style'. The text size has been enlarged and the font has been changed to serif. Ask:

- What difference does the change of font make to a user?  
*It makes the screen easier for someone with impaired vision to read.*

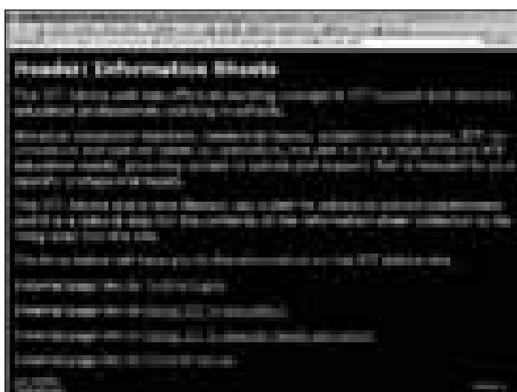
### Slide 4



Slide 4 shows the same page again. This time the user has turned off the 'display images' option in the browser. Ask:

- Why would a user do this?  
*To achieve a faster download.*
- Is the web page still usable?  
*Yes, if you just want the information contained in the text.*

### Slide 5



Slide 5 shows the BECTa Text only site. Draw attention to the changes in the colours that are used. Explain that the dark background and light text makes it easier for someone who has impaired vision to read. Point out that the information is simply listed in one column down the page. This makes it accessible to all web browsers, including text-only browsers and non-visual browsers that read the text to the users.

Explain that there are differences in the way web browsers display a web page and that pupils should take this into account when they design their websites. For example, **slide 6** shows how the same Becta page looks in the Mosaic web browser.

#### Slide 6



Stress that the way information is displayed is as important as the information itself. The audience must be able to read the content of the website. The information must also match their needs and interests.

Ask pupils to work in their groups of four, preferably around tables. Show **slide 7** from Teacher resource 3.ppt and use it to explain the task.

#### Slide 7



Give pupils 4 to 5 minutes to work on the task, then collate ideas on a whiteboard or flipchart. Ask:

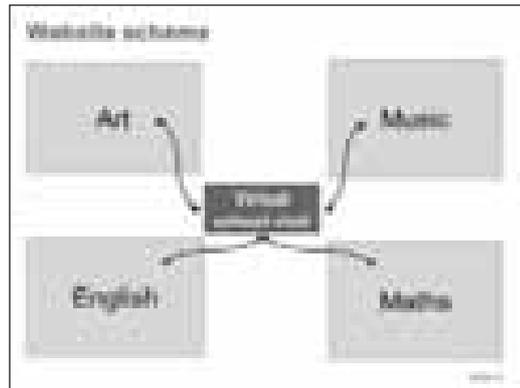
- What are the links between information and audience?  
*For example:*  
*Pupils are familiar with the school curriculum and want more details of what they will study; parents are more concerned about the examination qualifications that courses lead to.*  
*Pupils are interested in what they will do in school clubs; parents want to know what time each club will finish.*  
*Pupils want to know what class they will be in and whether their friends will be in their class; parents want to know how big the class will be.*  
*Parents want to know what facilities a school has – how many science labs, how many computers, whether the school has a sports centre; pupils want to know where these facilities are on the school site and how to find their way from one to another.*  
*Parents want to know the size of the school library; pupils want to know what books are in it and whether their favourite authors are included.*

Stress again the importance of matching the information provided to the audience's needs and expectations.

## 2 Outlining the structure

Explain that, before a website can be created, the information it will include needs to be planned and organised. Show **slides 8 to 10** of Teacher resource 3.ppt to explain the use of a website schema.

### Slide 8



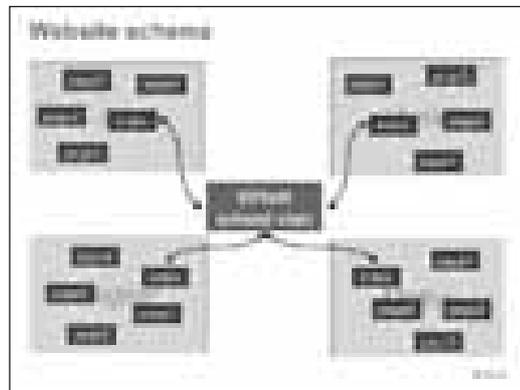
For clarity, only four sections to the proposed website have been shown – four subject departments. The range of sections could be extended to include as many as you need.

The website does not have to be divided up into subject departments. It could, for example, be divided up into sections for Key Stage 3 and Key Stage 4, and the sixth form. The sections can be discrete or interrelated, but they will all link to the theme of the site: the school.

Explain that each section will be created by a group of pupils.

Show **slide 9** to illustrate how some pages have been added as examples.

### Slide 9

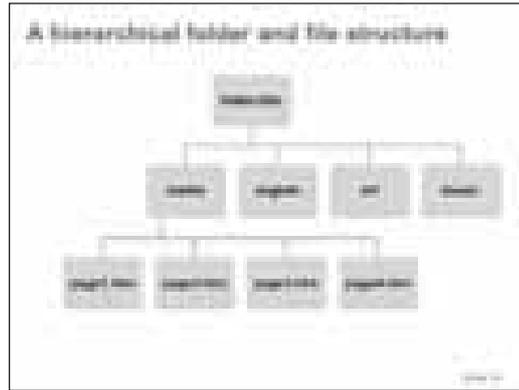


Say that there will need to be suitable links to move from any page to any other page within the section but also to move to and from other sections. Explain that the set of web pages with cross-references or links between them is called *hypertext*.

Stress that one aspect of good website design is the ability to return easily to the beginning, the home page.

**Slide 10** shows an example of a hierarchical folder and file structure.

**Slide 10**



This is different from the website schema. It does not indicate links but merely the relationship of one file to another in terms of their physical placement.

**15 minutes**

### 3 Identifying routes through the information

Ask pupils to continue working around tables, in their groups of four. Allocate a section of the proposed website to each group, and the theme for that section. Ask each group to plan a series of pages for their theme, bearing in mind:

- what information they and other pupils would want;
- what information their parents might want;
- what information a general visitor might want.

Ask the groups also to think about linear routes through their pages. To do this, they can use the A3 paper and pads of yellow sticky notes, which allow 'pages' to be moved easily. When they are content with their plan, they can sketch it on the paper.

Give the groups about 5 minutes for general discussion, then ask them to be more specific and to plan the structure of pages and a route through them for at least two different visitors: a parent on a visit to the school, a prospective teacher.

As the groups work, aim to give some extra help (differentiated teaching) to the groups who most need help. From time to time, check the progress of other groups. Extend their thinking by asking questions such as:

- What is the possible purpose of the visit? What would the visitor be looking for?
- What must the pages contain to enable them to find the information they need or want?

Keep copies of the plans produced by each group.

10 minutes

## 4 File and folder structure

Ask pupils to refer to their plans. Say that now they have plotted routes they will need to consider where and how files will be saved. It is easier if pages and their resources are grouped together so that changes can be made and resources can be found easily.

Some images, sounds or other resources may be used in more than one group of pages. If they are saved in an area that is accessible to all pupils, these resources can be updated easily and need be stored only once. To make this easy, each group will have a separate folder in which to store their files for their section of the website. The home page for the whole site will lie outside these folders.

Demonstrate a hierarchical folder structure that matches the groupings you have made and the responsibilities you have allocated to each group. If appropriate, refer pupils back to **slide 10** from Teacher resource 3.ppt.

10 minutes

## 5 Plenary: Reviewing the plan for the website structure

Refer back to the objective for this lesson, which was for pupils to plan their part of the website. Choose two groups to describe their structures to the rest of the class, explaining their reasoning. As they do so, draw attention to the good features of the designs. Use opportunities to stress the vocabulary and technical terms involved, referring as appropriate to the wall display.

Involve the rest of the class by inviting them to question the groups, for example, by asking:

- Why is that feature important?
- Why did you decide to do it like that?
- Is that the most efficient way to get from one page to another?

## Homework: Researching users' needs and interests

Set this task.

### What to put on a website

- 1 Discuss with the adults in your family what they would like to see on a website about the school. Record their suggestions as a list.
- 2 What information would you want to find if you were transferring to a new school after moving house? Record your items in a list.
- 3 Compare the two lists for similarities and differences. What is the same about them? What is different about them?

## Introducing web page creation, structure and appearance

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Refining and presenting information

- Use a range of ICT tools efficiently to combine, refine and present information by:
  - extracting, combining and modifying relevant information for specific purposes.

#### DEVELOPING IDEAS AND MAKING THINGS HAPPEN

##### Analysing and automating processes

- Automate simple processes by creating simple software routines.
- Consider the benefits and drawbacks of using ICT to automate processes.

### Key vocabulary

**From Year 6:** table

**From Year 7:** logo, serif/sans serif, white space

**From Year 8:** style sheet

### Preparation and planning

- Familiarise yourself with Teacher resource 5.ppt, *A guide to using FrontPage Express*. If you are using a different application, edit the resource to suit your own software. Copy this resource file to the shared area of the network so that pupils can access it during the lesson.
- Have ready an image of the school logo, or use the sample logo provided, hswanim2.gif. You may also wish to use a photograph of the school buildings or a group of pupils (optional). For FrontPage Express, the logo and the photograph need to be in GIF or JPG format.
- Prepare the four sample style sheets, one.css, two.css, three.css and four.css, ready to use in your demonstration. You may wish to use the file school.htm to experiment with these style sheets.
- Familiarise yourself with the use of style sheets in your web page creation software.
- Copy the logo, photograph and the four sample style sheets to the appropriate folders so that pupils can access them during the lesson.
- Check that any other scripts and style sheets that you intend to use in the lesson operate correctly.
- Add new vocabulary to the wall display.
- Prepare copies of Pupil resource 5.pdf, *Three page layouts*, one for each group of four pupils.

- Make copies of Pupil resource 7.pdf, enough for the pupils who will use it.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task, one per pupil.
- Load Teacher resource 4.ppt, *A slide presentation for lesson 4*, ready to show on the large display.

## Resources

- Computer and large display
- Internet and intranet access, with an Internet browser for you, accessible to pupils on the network
- Software, such as Microsoft Office, for wordprocessing and presentations
- Web page creation software (this lesson is based on a basic package, FrontPage Express – see the note on page 4)
- Printer
- Whiteboard or flipchart
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 4.ppt, *A slide presentation for lesson 4*
  - Teacher resource 5.ppt, *A guide to using FrontPage Express*
  - hswanim2.gif, *A sample logo*
  - school.htm, *A sample web page*
  - one.css, *Sample style sheet 1*
  - two.css, *Sample style sheet 2*
  - three.css, *Sample style sheet 3*
  - four.css, *Sample style sheet 4*
  - 8.2 homework tasks.pdf, *Homework tasks*
  - 8.2 vocab cards.pdf, *Flash cards of the key vocabulary used in this unit*
- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 5.pdf, *Three page layouts*
  - Pupil resource 6.pdf, *Using style sheets*
  - Pupil resource 7.ppt, *Web pages*

## Lesson outline

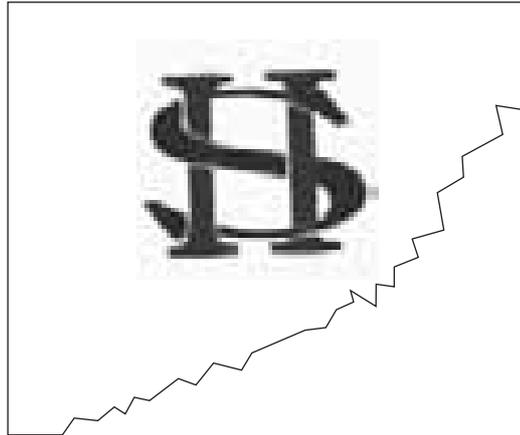
**60 minutes**

<b>1</b>	<b>Starter: Thinking about page layouts</b>	Group activity Whole-class discussion	10 minutes
<b>2</b>	<b>Demonstrating the web page creation software</b>	Demonstration paired work	25 minutes
<b>3</b>	<b>Style sheets</b>	Demonstration Paired work	20 minutes
<b>4</b>	<b>Plenary: Advantages of style sheets</b>	Whole-class discussion	5 minutes
	<b>Homework: Finding images for the section of the website</b>	Individual work	

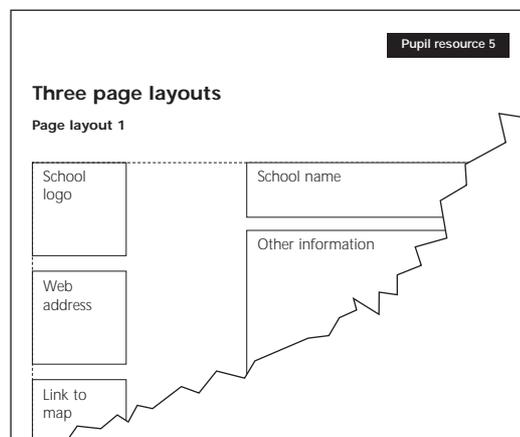
# Activities

Before the start of the lesson:

- if you have not already done so, load **Teacher resource 4.ppt**, ready to show on the large display;
- prepare to use FrontPage Express, or your own choice of web creation software, later in the lesson (see the note on page 4);
- make sure that the school's logo in GIF or JPG format is available (alternatively, use **hswanim2.gif**, a sample logo), plus a photograph of the school if you intend to use it;



- put out on tables enough copies of **Pupil resource 5.pdf**, *Three page layouts*, for each group of four pupils.



10 minutes

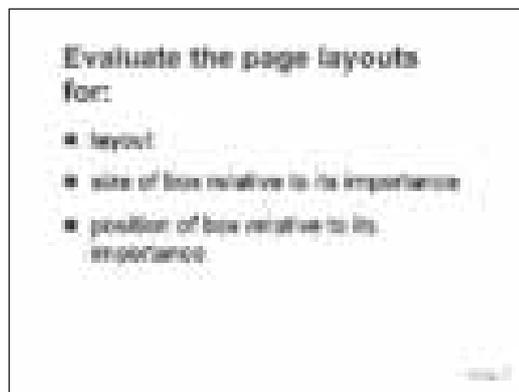
## 1 Starter: Thinking about page layouts

Explain to the class that the three page layouts on the tables are possible designs for the main home page of their website. Ask pupils, working in their groups of four, to evaluate the three layouts against the criteria on the whiteboard or flipchart. Show **slide 1** from Teacher resource 4.ppt to indicate what features they should evaluate.

### Slide 1

**Evaluate the page layouts for:**

- layout
- size of box relative to its importance
- position of box relative to its importance

A presentation slide with a white background and a thin black border. The title 'Evaluate the page layouts for:' is in bold. Below it is a bulleted list with three items: 'layout', 'size of box relative to its importance', and 'position of box relative to its importance'. A small number '1' is in the bottom right corner.

After 5 minutes take feedback from each group.

Show **slide 2** from Teacher resource 4.ppt. Explain that for the purpose of this lesson you will be using this layout for the main home page. Stress that it is based on a grid of rectangles, which creates a structure into which they can put the content. Remind pupils that the size of the web browser window can be changed and that this will affect what the user can see.

### Slide 2

**Layout for a home page**

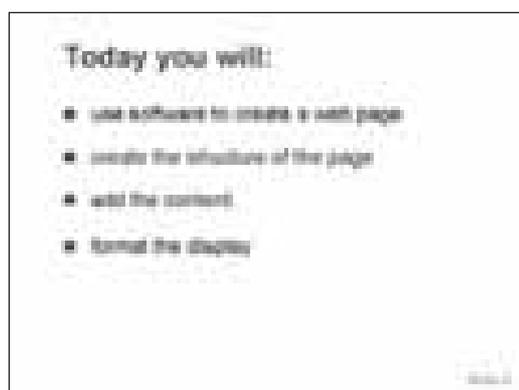
A presentation slide with a white background and a thin black border. The title 'Layout for a home page' is in bold. Below it is a wireframe diagram of a web page layout. The layout consists of a header section with three columns, a main content area with a large central rectangle and two smaller side rectangles, and a footer section with three columns. A small number '2' is in the bottom right corner.

Tell pupils that by the end of this lesson they will have learnt how to use your chosen software to create a basic web page. Their page will eventually include text and an image. Show **slide 3** from Teacher resource 4.ppt to explain the objectives for this lesson.

### Slide 3

**Today you will:**

- use software to create a web page
- create the structure of the page
- add the content
- format the display

A presentation slide with a white background and a thin black border. The title 'Today you will:' is in bold. Below it is a bulleted list with four items: 'use software to create a web page', 'create the structure of the page', 'add the content', and 'format the display'. A small number '3' is in the bottom right corner.

## 2 Demonstrating the web page creation software

Tell pupils that in this lesson they are going to create the main home page for the website. Explain that you will first demonstrate how to use the web page creation software. They will then work in groups to create the page.

The notes below assume that you will be working with FrontPage Express (see the note on page 4). Adapt the notes for your chosen software. The references that follow are to slides in **Teacher resource 5.ppt**, to which you refer back when pupils are working.

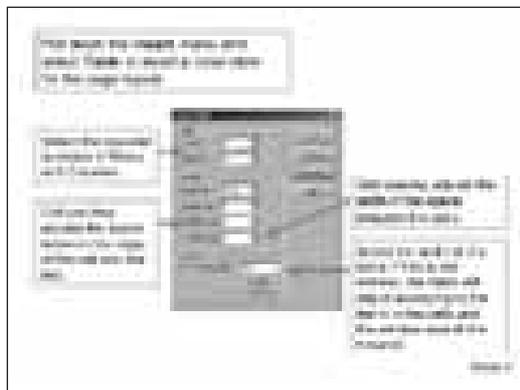
### Step 1 (or slide 1)



Say that when the application is opened the software automatically creates a new page. Point out the standard toolbars and menus, drawing attention to some of the icons.

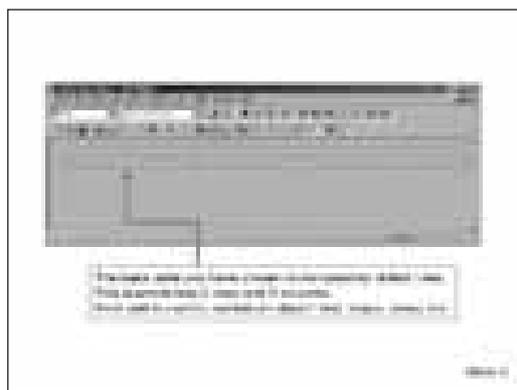
Point out that the approximate download time for the page is indicated at the bottom of the screen; this will become more important as work progresses.

### Step 2 (or slide 2)



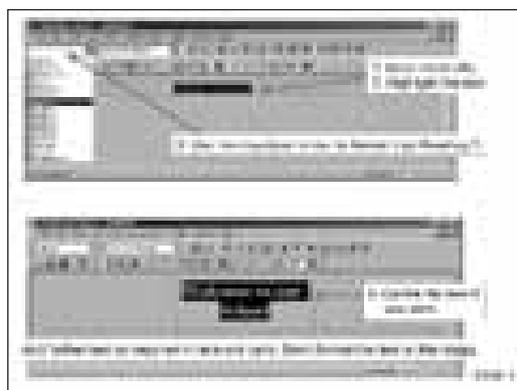
Explain that it is difficult to position items in a web page. HTML allows objects such as text and images only to be centred, or aligned to the left or right side of the screen. Web page designers often use a table to help them to set out the page, rather like the page layouts that they have been considering. Objects are inserted into the cells of the table, which helps to position them. The menu for setting up the table is similar to the table menu in Microsoft Word.

### Step 3 (or slide 3)



A table is indicated by dotted lines. For your home page, you will need three columns and three rows. Specify the width of the table to be 100%.

### Step 4 (or slide 4)



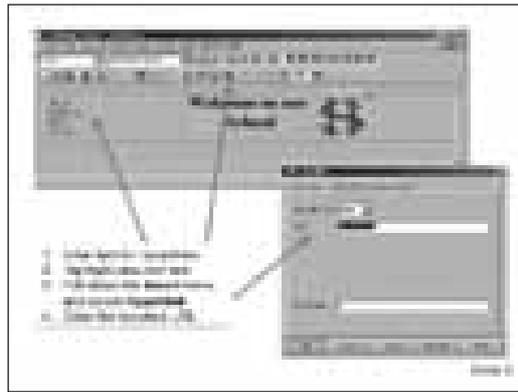
Type the name of the school into the centre top box, for example, 'Welcome to [the name of the school]'. Highlight the text, pull down the Style menu and select Heading 1, the most important heading.

### Step 5 (or slide 5)



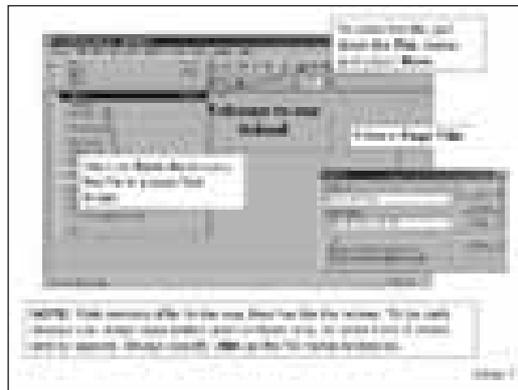
Add the first subject for the subject menu into the left-hand box. You may decide to type them in alphabetical order. Say that the subjects will eventually be hyperlinked to the information about that subject.

### Step 6 (or slide 6)



Show how the links will be prepared by pulling down the Insert menu and selecting Hyperlink.

### Step 7 (or slide 7)



As with all work in ICT, the file should be saved regularly. To save the file, pull down the File menu and select Save. Remind pupils that they should save the file to a specified folder. The file name should be in lower case, with no more than eight letters and no spaces, and have .htm as the file name extension. This will allow any web browser to read it.

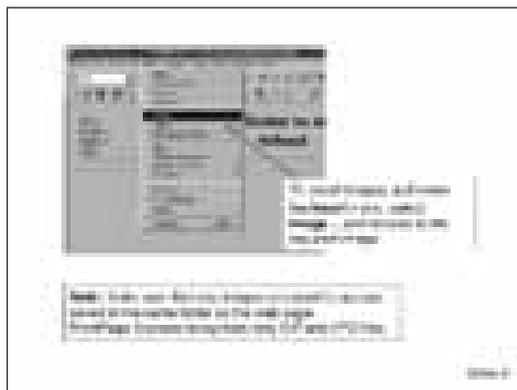
At this point, ask pupils in their pairs to access FrontPage Express and to reproduce the page that you have created.

Allow about 5 minutes for pupils to do the task. Encourage confident pairs of pupils to add information in the bottom row:

- linking to a map;
- the headteacher's name;
- the school's e-mail address.

Now continue with your demonstration.

### Step 8 (or slide 8)

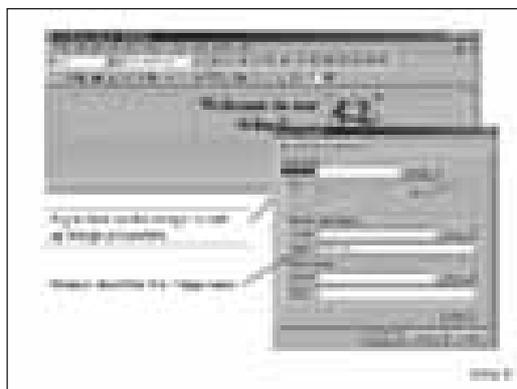


Explain that you will now add the school logo, which is an image. This must be in the same folder as the web page you are designing – show pupils that both the file and the image are in the same area.

The procedure for including an image is simple; it is exactly the same as adding an image to a Microsoft Word file. Pull down the Insert menu and select Image. Browse your way to the folder where the image is stored and select the image file. Point out that most older web browsers can display only GIF and JPG files and will allow only those formats to be used; up-to-date browsers allow other file types as well. Remind the class that GIF and JPG files are compressed and are smaller in size than other files.

Resize and insert the photograph of the school if you intend to use it. Explain the importance of resizing an image to the required dimensions to create as small a file as possible for faster downloading.

### Step 9 (or slide 9)

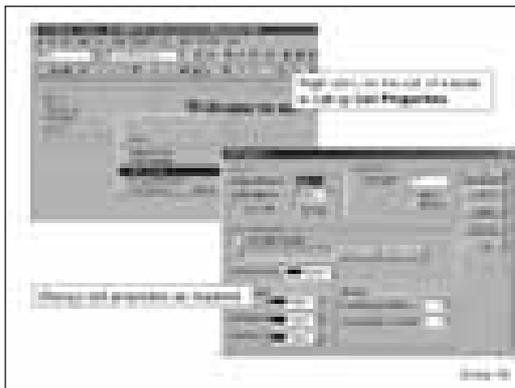


When the image of the logo is inserted, describe its properties. Right click on the image and complete the Image properties box. Repeat for the photograph. Say that they should always complete this box; if a user's browser doesn't support images, or the facility to display the images is turned off, the description will appear in place of the image.

Ask the class:

- Why might a user switch off the facility to display images?  
*To reduce downloading time.*

### Step 10 (or slide 10)



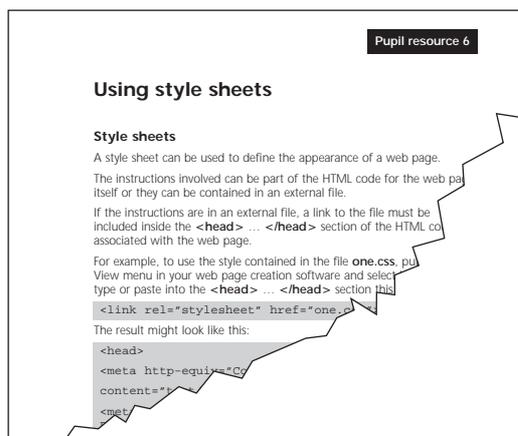
Say that at this point pupils can begin to see what the page might look like. Demonstrate how to change the cell properties and absolute pixel size. Discuss briefly the difference between using percentages and absolute pixel size. For example, the BBC home page has a fixed table width in pixels and does not usually fill up the browser window.

Save the file again. Now ask the class to add the logo and photograph to their own web pages, to specify the properties and to save their files again.

20 minutes

## 3 Style sheets

If you intend to do a live demonstration of how to use style sheets, follow the instructions in **Pupil resource 6**, *Using style sheets*. Use the four sample style sheets, **one.css**, **two.css**, **three.css** and **four.css**.



**Using style sheets**

**Style sheets**

A style sheet can be used to define the appearance of a web page. The instructions involved can be part of the HTML code for the web page itself or they can be contained in an external file. If the instructions are in an external file, a link to the file must be included inside the `<head>` ... `</head>` section of the HTML code associated with the web page.

For example, to use the style contained in the file `one.css`, put View menu in your web page creation software and select type or paste into the `<head>` ... `</head>` section this:

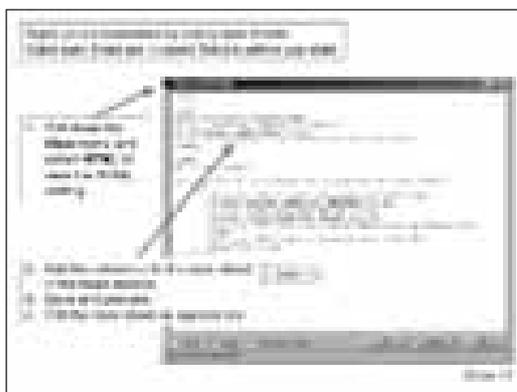
```
<link rel="stylesheet" href="one.css">
```

The result might look like this:

```
<head>  
<meta http-equiv="Content-Type" content="text/html" charset="utf-8">  
</head>
```

Alternatively, show **slide 11** of Teacher resource 5.ppt.

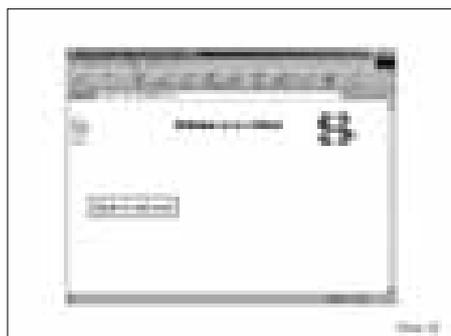
### Step 11 (or slide 11)



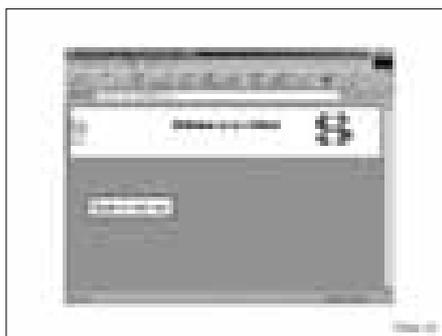
Explain that this slide shows first how to view the HTML code for the web page and insert the name of the style sheet to be used.

Say that **slides 12 to 15** show four different style sheets applied to the same information.

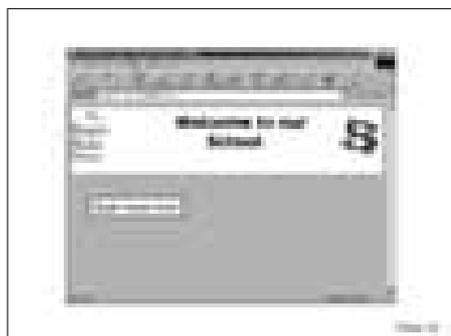
**Slide 12**



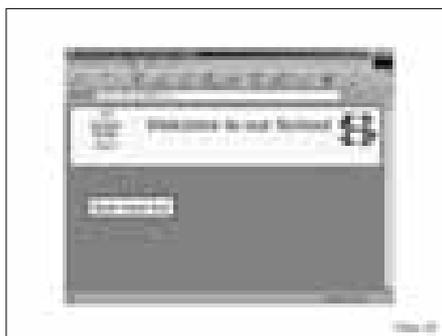
**Slide 13**



**Slide 14**



**Slide 15**



Give out Pupil resource 6, *Using style sheets*. Ask pupils to add the link to one of the four style sheets by typing the appropriate line between the `<head>` and the `</head>` tags.

Pupils should use and evaluate the four sample style sheets and modify the font, font size and colours.

You may decide that not all pupils are ready for this activity. If so, they should apply only one of the styles.

**5 minutes**

#### **4 Plenary: Advantages of style sheets**

Bring the class together. Ask:

- What difficulties have you had with any of the work in today's lesson?

Note the responses so that you can prepare some revision for the early part of the next lesson.

- What do you think are the advantages of style sheets to the designer of a website and to the users of the site?  
*Consistency, since the design can be the same throughout the site or section; efficiency, since changes to one file are rippled through the site.*
- What do you think are the advantages of style sheets to the users of the site?  
*A page that can be read regardless of the browser; the opportunity to alter the style, if it would suit the user to do so.*
- When might it suit a user to alter a style sheet?  
*For example, a person with impaired vision may want to choose to view the text only, or to change the font size, or to change the colours to make them easier to see.*

Say that by using style sheets they will be starting to take account of the needs of the users of their website.

Conclude by referring back to the objectives for the lesson. Draw attention to the technical terms used in the lesson.

**Note:**

You will need to save a copy of the home page created in this lesson, making sure that it has links to each of the sections that the groups of four pupils are going to prepare.

### Homework: Finding images for the section of the website

Set this task.

#### Finding images for your web pages

Find at least two images that might enhance your section of the website. They could be photographs, pictures or sketches that could be scanned and inserted on a page, or examples of clip art. They could be examples of work that you or other pupils have done in a subject, or something that illustrates the nature of the subject.

Remember that the images should be interesting and meaningful to the users of the site.

Remember also that some images are copyright and may not be used without permission.

Provide suitable sources for any pupils doing homework in a homework centre.

## Designing and creating a front page for a section

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Refining and presenting information

- Use a range of ICT tools efficiently to combine, refine and present information by:
  - extracting, combining and modifying relevant information for specific purposes.

#### DEVELOPING IDEAS AND MAKING THINGS HAPPEN

##### Analysing and automating processes

- Automate simple processes by creating simple software routines.

### Key vocabulary

No new vocabulary is introduced in this lesson.

### Preparation and planning

- Make sure that there are extra copies available of Pupil resource 6.pdf, *Using style sheets*, either as hard copies or accessible on the network.
- Make sure that you have created folders for pupils to store the pages that they create during this lesson. Check the folder structure and ensure that permissions for access to folders are correct.
- Copy appropriate logos, photographs and the four style sheets, one.css, two.css, three.css and four.css, to the appropriate folders so that pupils can access them during the lesson.
- Have available the designs for a website which pupils planned in lesson 3.
- Brief any support staff who are available to help in the lesson.
- Add new vocabulary to the wall display.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task, one per pupil.
- Check that FrontPage Express (or any other software you are using instead), Teacher resource 5.ppt, *A guide to using FrontPage Express*, and Pupil resource 6.pdf, *A guide to using style sheets*, are all accessible on the network.
- Load Pupil resource 7.ppt, *Some websites*, on the network.
- Load Teacher resource 6.ppt, *A slide presentation for lesson 5*, ready to show on the large display.

## Resources

- Computer and large display
- Internet and intranet access, with an Internet browser for you, accessible to pupils on the network
- Software, such as Microsoft Office, for wordprocessing and presentations
- Web page creation software, such as FrontPage Express (see the note on page 4)
- Digital cameras
- Printer
- Whiteboard or flipchart
- Squared paper
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 5.ppt, *A guide to using FrontPage Express*
  - Teacher resource 6.ppt, *A slide presentation for lesson 5*
  - hswanim2.gif, *A sample logo*
  - one.css, *Sample style sheet 1*
  - two.css, *Sample style sheet 2*
  - three.css, *Sample style sheet 3*
  - four.css, *Sample style sheet 4*
  - 8.2 homework tasks.pdf, *Homework tasks*
  - 8.2 vocab cards.pdf, *Flash cards of the key vocabulary used in this unit*
- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 6.pdf, *Using style sheets*
  - Pupil resource 7.ppt, *Web pages*

## Lesson outline

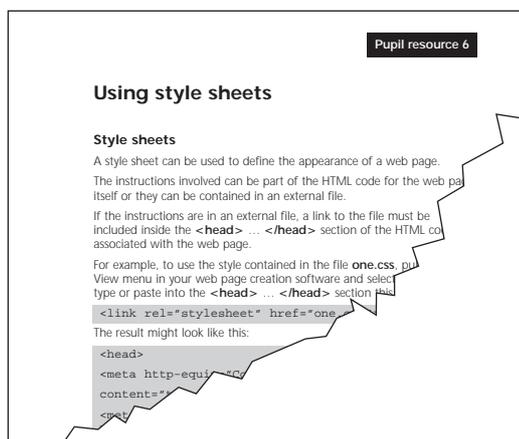
**60 minutes**

<b>1</b>	<b>Starter: Evaluating web pages</b>	Paired activity Whole-class discussion	10 minutes
<b>2</b>	<b>Planning the design of the front page of the section</b>	Group activity	10 minutes
<b>3</b>	<b>Creating the front page</b>	Demonstration Group activity	30 minutes
<b>4</b>	<b>Plenary: Evaluating the pages produced</b>	Demonstration Whole-class discussion	10 minutes
	<b>Homework: Suggestions for improving the page</b>	Individual work	

# Activities

Before the start of the lesson:

- if you have not already done so, load **Teacher resource 6.ppt**, ready to show on the large display;
- load **Pupil resource 7.ppt**, *Some websites*, on the network;
- check that FrontPage Express, **Teacher resource 5.ppt**, *A guide to using FrontPage Express*, and **Pupil resource 6**, *Using style sheets*, are all accessible on the network.

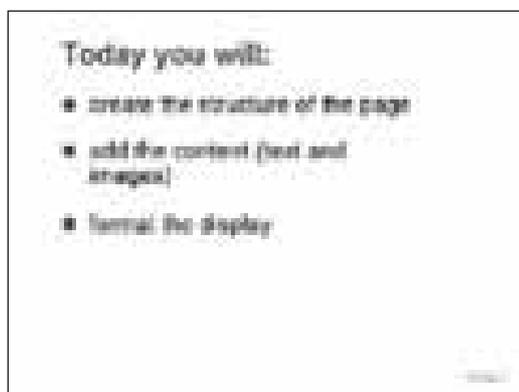


10 minutes

## 1 Starter: Evaluating web pages

Tell pupils that by the end of this lesson they will have used your chosen software to create their own front page. Show **slide 1** from Teacher resource 6.ppt to explain the objectives for this lesson.

### Slide 1



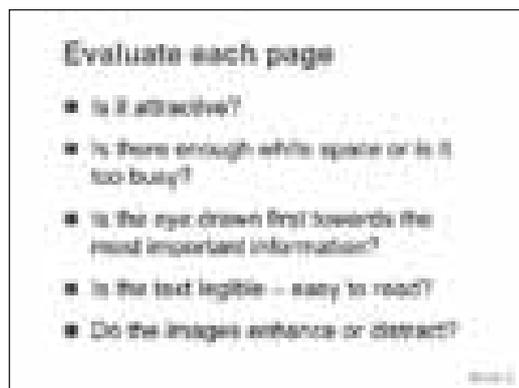
Remind pupils of their work in lesson 1 of this unit. Ask:

- What criteria do we use to evaluate a website?  
*Is the information on the website relevant to the users?*  
*Is the site easy to use and to navigate?*  
*Is the information on the site clear, up to date, accurate and unbiased?*  
*Is the display attractive in a way that enhances and does not distract, with meaningful illustrations? Is the font size suitable?*

Ask pupils, working in pairs, to discuss the criteria from the first page of **Pupil resource 7.ppt**, then to look at the website pages shown in the resource.

They should consider each page in turn, and discuss with each other the kind of table or rectangular framework on which the page is based. Show **slide 2** of Teacher resource 6.ppt to indicate the questions that they should consider in relation to each page.

### Slide 2



After 4 to 5 minutes, take feedback on pupils' views. Stress that:

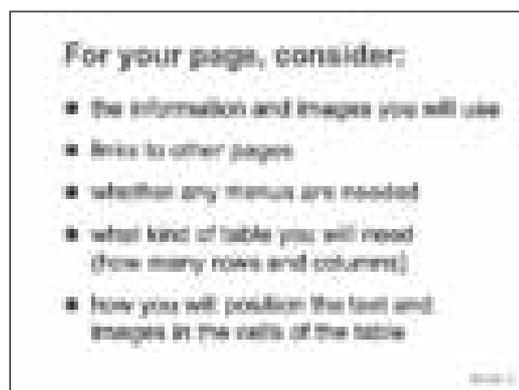
- it is essential that the front page is clear and not too busy, with not too many cells in the basic table and not too many colours;
- fonts should be of appropriate size;
- there should be a suitable balance between text and images;
- the front page should interest users and encourage them to explore further.

10 minutes

## 2 Planning the design of the front page of the section

Ask pupils to work in their groups of four, preferably around tables. Give each group a supply of squared paper. Tell them that they have 10 minutes to design the layout for their page. Tell them to consider the factors shown on slide 3 of Teacher resource 6.ppt.

### Slide 3



While the groups are working, remind them of their website designs from lesson 3 and the links that they might want to other pages. Give out their designs at this point. Ask them also to consider their homework from lesson 3, and what they had decided would be interesting information for the users of the site. They need to consider which of these items they should include on their home page, and which should be on linked pages.

30 minutes

### 3 Creating the front page

If necessary, show slides from **Teacher resource 5.ppt**, *A guide to using FrontPage Express*, to remind pupils about any techniques that they found difficult in the previous lesson. Tell them that this resource is also available to them on the network if they want to refer to it.

Ask pupils, working in their groups of four, to create the front page for their section. Tell them that there are digital cameras and scanners available for them to prepare any images they want to use on their pages. Remind them that these images must be placed in the same folder as the web page. Alternatively, they could use the images you have already placed in the folders.

Ensure that the groups work collaboratively and that all pupils contribute. For example, it would be possible for each pair to create a home page. The combined group of four could then discuss these and combine the best features from both of them into the agreed front page for the section. Alternatively, one pair could prepare the images for the page while the other pair prepares the text.

Remind the class that there are prepared style sheets in their folders for them to modify. Refer them to **Pupil resource 6**, *Using style sheets*, which is available, either as hard copy or on the network.

10 minutes

### 4 Plenary: Evaluating the pages produced

Bring the class together. Choose two or three groups to demonstrate their work so far. Involve the rest of the class by asking questions such as:

- What do you think might make this front page more visually interesting and give it more impact?
- How effective is the use of colour?
- Would you have chosen to have put this information in this position?
- What ideas have you gained from seeing this page that would help you to improve your own work?

Ask the class as a whole:

- In what ways have you taken account of the needs and interests of the users in your work so far?  
*For example, by selecting relevant information, by positioning the most interesting information for the user in the centre of the screen, by making sure that the screen is not too cluttered and that the sizes of any fonts used are suitable.*

Conclude by referring back to the objectives for this lesson. Draw attention to the technical terms used in the lesson.

## Homework: Suggestions for improving the page

Set this task.

### **Improving your page**

Make notes about ways in which your first page might be improved.

Think about:

- the use of colour;
- the style and size of font;
- the relevance of the images;
- the overall layout and the position of items on the page.

## Designing web pages

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Refining and presenting information

- Plan and design presentations and publications, showing how account has been taken of:
  - audience expectations and needs;
  - the ICT and media facilities available.

#### DEVELOPING IDEAS AND MAKING THINGS HAPPEN

##### Analysing and automating processes

- Represent simple design specifications as diagrams.

### Key vocabulary

No new vocabulary is introduced in this lesson.

### Preparation and planning

- Copy Pupil resource 8.ppt to the shared area of the network so that pupils can use it.
- Have ready the designs for a website which pupils planned in lesson 3. Provide extra sheets of A3 paper and pads of yellow sticky notes.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task, one per pupil.
- Load Teacher resource 7.ppt, *A slide presentation for lesson 6*, ready to show on the large display.

### Resources

- Computer and large display
- Software, such as Microsoft Office, for wordprocessing and presentations
- Printer
- Whiteboard or flipchart
- Pads of yellow sticky notes
- A3 paper
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 7.ppt, *A slide presentation for lesson 6*
  - 8.2 homework tasks.pdf, *Homework tasks*

- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 8.ppt, *More web pages*
  - Pupil resource 9.pdf, *A worksheet: Evaluating web pages*

## Lesson outline

**60 minutes**

<b>1</b>	<b>Starter: Considering the purposes of websites</b>	Whole class Paired activity Group work	10 minutes
<b>2</b>	<b>Planning and designing pages for the section</b>	Group work Individual work	40 minutes
<b>3</b>	<b>Plenary: Sharing examples</b>	Pupil demonstrations Whole-class discussion	10 minutes
	<b>Homework: Drafting the text for a page</b>	Individual work	

# Activities

Before the start of the lesson:

- if you have not already done so, load **Teacher resource 7.ppt**, ready to show on the large display;
- load **Pupil resource 8.ppt**, *More web pages*, onto the network;
- distribute copies of **Pupil resource 9**, *Evaluating web pages*, one for each pair of pupils at a computer.

Pupil resource 9

### Evaluating web pages

Look at the web pages you have been given.  
Identify the main purpose of each site. Is it:

- to inform
- to educate
- to illustrate
- to advertise
- to entertain?

Do the images on the page enhance or distract from the purpose of the page?

Example	Theme of site	Main purpose
1	IEA Greenhouse gas RD programme	
2	Hamlet	

10 minutes

## 1 Starter: Considering the purposes of websites

Tell pupils that in this lesson they will work as a group to refine the home page for their section and to lay out the rest of their pages. By the end of the lesson they will have consolidated their learning from the previous lesson and furthered their design ideas for the rest of their site, building on their ideas from lesson 3. Show **slide 1** from Teacher resource 7.ppt to explain the objectives for today's lesson.

### Slide 1

Today you will:

- use diagrams to help design pages for a website
- take account of the interests and needs of different users of the site
- take account of the ICT available

Ask pupils to work in pairs and to look at the website pages in Pupil resource 8.ppt, *More websites*. They should consider each page in turn, and whether its purpose is to inform, educate, illustrate, entertain or advertise.

Ask the pairs to discuss each page. On their copies of **Pupil resource 9**, they should identify the main purpose of each web page, using one of the words in the bulleted list on the sheet. They should also say whether the image enhances or distracts from the purpose of the page.

After 4 to 5 minutes, take feedback. Answers to the questions are not necessarily clearcut, so ask pupils to debate and to justify their viewpoints. Make sure that these points are raised in discussion.

- Sites that are there to advertise or sell goods may attract people to look at them by adding an entertainment element (for example, the Water in schools and the Joe Cartoon sites). Some sites use text that is intended to amuse in a similar way (for example, the Hamlet video site). You may or may not like the entertainment factor. If you dislike it, it could put you off buying the goods.
- The layout, images and text of some sites, such as the Waitrose site, make it clear in a straightforward way what the purpose is.
- The images on some sites are very clear and are obviously related to the theme of the site. They are fairly simple and look attractive on the page (for example, the Water in schools and National Railway Museum sites).
- The home pages of some sites take more studying. They are packed with detail (for example, the CITV site) but the information is all relevant and helpful.

Ask pupils, again in their groups of four, to have another look at the first page for the section that they created in the previous lesson. Taking account of their individual opinions from their last homework, and the ideas from the starter for this lesson, they should now agree and make a note of any amendments they want to make to their first page for their section.

Tell pupils that they will have an opportunity to make these modifications in the next lesson.

40 minutes

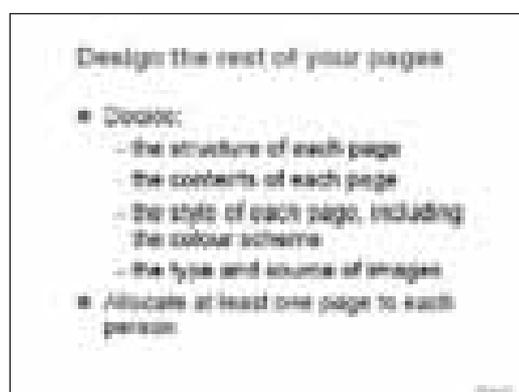
## 2 Planning and designing pages for the section

Refer the groups to their plans for the structure of the website that they created in lesson 3. Ask the groups to review and finalise their plans. They should confirm the number of pages and what each page will be called. They should also confirm the links between the pages and the links back to the first page for their section. Offer the groups more sheets of A3 paper and pads of yellow sticky notes.

Choose a group to work with on this task.

Allow the groups about 7 to 8 minutes, then gather the attention of the whole class. Use **slide 2** of Teacher resource 7.ppt to brief them for the next stage of the work.

### Slide 2



Explain that when they have completed the review of the structure of their section, they should start to design the rest of their pages. They should work in their groups of four to start work on these. The group as a whole should decide

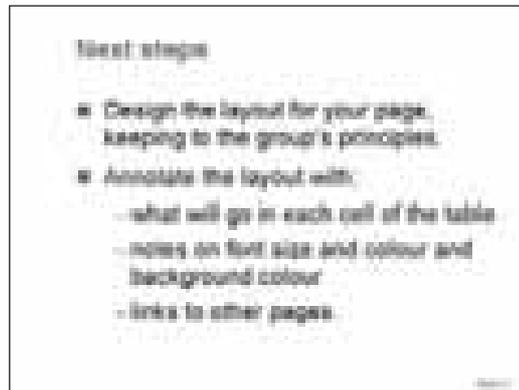
on the content of each page for their section, which pages need to have a common style and which might be different. They should also discuss the colour scheme for their pages and the source of any images that they want to use.

When pupils in the group are agreed on these points, they should decide how to divide the pages, assigning one or more pages to each individual member to work on.

Select a different group to work with on this task.

After about 10 minutes, brief the whole class on the next stage, using **slide 3** of Teacher resource 7.ppt.

### Slide 3



Explain that individuals should use A3 paper to create a layout for their page. The layout must conform to the principles that the group as a whole has agreed. The page layout must be annotated with what is to be used, where it will be placed and what links to other pages will be made. The annotations should indicate whether text is a heading, body text or a hyperlink. Note the colours for the background, text and table cells, if relevant. Links and images should indicate the file name that is being referenced.

Gather the attention of the whole class. Say that at this stage they will probably need to review either the style or the structure of their part of the website. Again in their groups of four, they should discuss the work so far.

Remind the groups once again about the audience and purpose of the web site. Allow the remaining time for this part of the lesson for this task.

10 minutes

### 3 Plenary: Sharing examples

Select one or two groups to demonstrate their plans. Involve other groups by asking them to question the groups who are demonstrating and to identify any resource implications.

Finish the lesson by referring pupils back to the objectives for the lesson.

### Homework: Drafting the text for a page

Set this task. Remind pupils that they will need their drafted text in the next lesson.

#### Drafting the text for your page

During the lesson, you created a plan for your page of the website. Draft in full the text that you will need for the page, either on paper or in a text editor.

Remember that you will need your drafted text in your next ICT lesson.

## Creating more web pages

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Communicating

- Use ICT effectively to adapt material for publication to wider or remote audiences.

#### DEVELOPING IDEAS AND MAKING THINGS HAPPEN

##### Analysing and automating processes

- Automate simple processes by creating simple software routines.

### Key vocabulary

No new vocabulary is introduced in this lesson.

### Preparation and planning

- Create a library of suitable images of the school for any pupils who may need them because of absence or for other reasons. Copy appropriate logos, sound files, photographs and the four style sheets, *one.css*, *two.css*, *three.css* and *four.css*, to the appropriate folders so that pupils can access them during the lesson.
- Prepare some suitable text to offer to pupils who have not completed their homework from the previous lesson.
- Make sure that FrontPage Express and Teacher resource 5.pdf, *A guide to using FrontPage Express*, will be accessible to pupils in the shared area of the network.
- Make sure that there are extra copies available of Pupil resource 6.pdf, *A guide to using style sheets*, either as hard copies or accessible on the network.
- Have available help guides for any other techniques causing difficulties.
- Identify pupils who can act as peer tutors.
- Brief any support staff who are available to help in the lesson.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task, one per pupil.
- Shortly before the lesson, check that websites that you intend to refer to are still available. If necessary, substitute alternatives.
- Load Teacher resource 8.ppt, *A slide presentation for lesson 7*, ready to show on the large display.

## Resources

- Computer and large display
- Several computers equipped with sound cards
- Internet and intranet access, with an Internet browser for you, accessible to pupils on the network
- Software, such as Microsoft Office, for wordprocessing and presentations
- Web page creation software, such as FrontPage Express (see the note on page 4)
- A graphics animation package with web function (optional)
- Image editing software
- Digital cameras
- Scanner
- Printer
- Whiteboard or flipchart
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 5.ppt, *A guide to using FrontPage Express*
  - Teacher resource 8.ppt, *A slide presentation for lesson 7*
  - hswanim2.gif, *A sample logo*
  - one.css, *Sample style sheet 1*
  - two.css, *Sample style sheet 2*
  - three.css, *Sample style sheet 3*
  - four.css, *Sample style sheet 4*
  - 8.2 homework tasks.pdf, *Homework tasks*
- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 6.pdf, *A guide to using style sheets*

## Lesson outline

**60 minutes**

<b>1</b>	<b>Starter: Reviewing home pages and the use of links</b>	Whole class Paired activity	10 minutes
<b>2</b>	<b>Creating the pages</b>	Group activity	40 minutes
<b>3</b>	<b>Plenary: Sharing examples</b>	Whole-class discussion	10 minutes
	<b>Homework: Reviewing the pages</b>	Individual work	

# Activities

Before the start of the lesson:

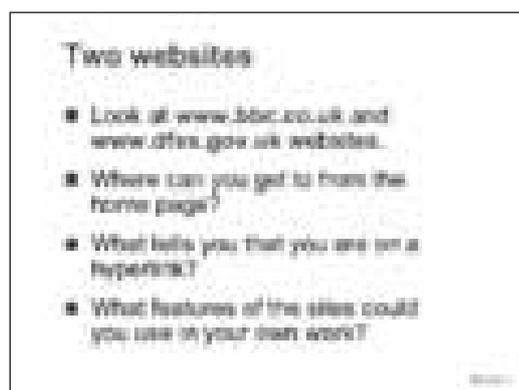
- if you have not already done so, load **Teacher resource 8.ppt**, ready to show on the large display;
- access [www.bbc.co.uk](http://www.bbc.co.uk) on the Internet.

10 minutes

## 1 Starter: Reviewing home pages and the use of links

Ask pupils to work in pairs. Tell them that you want them to look at two websites – [www.bbc.co.uk](http://www.bbc.co.uk) and [www.dfes.gov.uk](http://www.dfes.gov.uk) – and to consider the questions on **slide 1** of Teacher resource 8.ppt.

### Slide 1



After 4 to 5 minutes take feedback. Make sure that these points are covered in discussion.

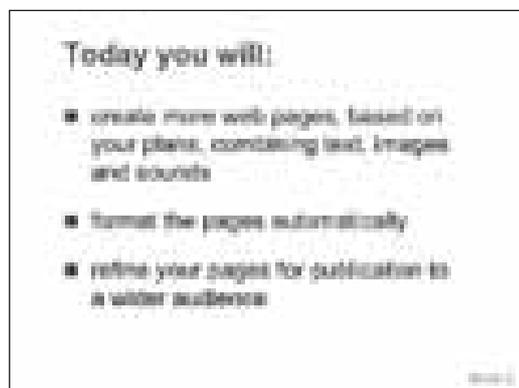
- Where can you get to from this home page?
- How do you know that you are on a hyperlink?  
*Most of the hyperlinks are obvious because of the layout of the screen, across the top in the BBC site, across the top and down the side in the DfES site. By rolling the pointer over the screen it is possible to find the hyperlinks. Text changes colour as you roll over. The contrast on the DfES site is greater.*
- Are there any other features of these sites that you could use in your own work?

## 2 Creating the pages

Tell pupils that in this lesson they will be creating the pages that they planned in their last lesson and which they developed further for their homework.

Show **slide 2** from Teacher resource 8.ppt to explain the objectives for this lesson.

### Slide 2



Remind pupils that the pages they create should be saved in the group's folder. They should test the links to ensure that they work as in their design.

Point out the range of resources that are available for them to use. As well as digital cameras and scanners there is a library of logos, images and sound files, and the four style sheets: **one.css**, **two.css**, **three.css** and **four.css**. Remind them that they can change the colour scheme of their pages by altering the style sheet.

If necessary, remind pupils about any techniques of which they are unsure. For example, you might need to demonstrate again how to alter the style sheets to change the colours used on the web page. Where appropriate, allocate peer tutors or assign technician support.

Decide where your own teaching time may be used most effectively. For example:

- Cluster two or three of the less confident groups or pairs together for the first 10 to 15 minutes so that you can guide them through the first few steps of the task and help them to clarify what the next steps will be.
- Support, at intervals, the groups who find it difficult to collaborate and agree on tasks or content.

As you work round the class, be pro-active and intervene. Ask groups or individuals:

- How are you taking account of the ICT and media resources available to you?
- Can you justify how your use of the technology would help users to find the information they want more easily?
- What is the purpose of this page or section? How are you taking account of the users' needs and interests?

Extend and refocus any groups who are more inclined to concentrate on visual and sound impact than on the quality and effectiveness of page content and structure. Encourage all the groups to use their page layouts and to make sure that they note on their plans any changes to their designs.

Towards the end of this part of the lesson, ask pupils to print copies of their web pages as drafted so far. They will need to make enough copies for everyone to have a printout to use for their homework.

Before you draw the activity to a close, identify one or two examples of good work and note them for the plenary.

10 minutes

### 3 Plenary: Sharing examples

Bring the whole class together. Use the large display to show and discuss the examples you selected at the end of the last activity. Ask pupils:

- Which of their features led me to select these web pages as examples of good work?
- Why is this particular feature important?
- What ideas have you gained from seeing this page that would help you to improve your own work?

Conclude the lesson by reflecting on its objectives and the extent to which they have been achieved. Draw attention to the wall display of vocabulary used in the unit and remind pupils of any definitions about which they are unsure. Say that the next lesson will start with an activity to identify which of the terms they are confident about.

### Homework: Reviewing the pages

Set this task.

#### Reviewing your web page

Take home the printout of your web page.

Annotate it with your thoughts for improvements or additions in preparation for the last lesson of this unit.

Remember that you will need to have it with you in your next ICT lesson.

Remind pupils before they leave that the annotated printout will be needed in the next lesson.

## Completing and evaluating the project

### ICT Framework objectives

#### EXCHANGING AND SHARING INFORMATION

##### Fitness for purpose

- Devise criteria to evaluate the effectiveness of own and others' publications and presentations, and use the criteria to make refinements.

##### Communicating

- Use ICT effectively to adapt material for publication to wider or remote audiences.

### Key vocabulary

No new vocabulary is introduced in this lesson.

### Preparation and planning

- Put any necessary finishing touches to the home page for the website created in lesson 4. Check that there are links from this page to the front page for each section so that the website being created will work as a whole.
- Use Pupil resource 10.pdf to print a set of key vocabulary sorting cards, one set for each group of four. Cut up and shuffle each set, and put each set of cards in an envelope.
- Make sure that pupils can access the logos, sound files, images and style sheets that you set up for the previous lesson.
- Make sure that FrontPage Express, Teacher resource 5.pdf, *A guide to using FrontPage Express*, and Pupil resource 6.pdf, *A guide to using style sheets*, are accessible to pupils in the shared area of the network.
- Have available help guides for any other techniques causing difficulties.
- Brief any support staff who are available to help in the lesson.
- Use 8.2 homework tasks.pdf to prepare copies of the homework task, one per pupil.
- Load Teacher resource 9.ppt, *A slide presentation for lesson 8*, ready to show on the large display.

## Resources

- Computer and large display
- Several computers equipped with sound cards
- Internet and intranet access, with an Internet browser for you, accessible to pupils on the network
- Software, such as Microsoft Office, for wordprocessing and presentations
- Web page creation software, such as FrontPage Express (see the note on page 4)
- A graphics animation package with web function (optional)
- Image editing software
- Digital cameras
- Scanner
- Printer
- Whiteboard or flipchart
- Teacher resources from the CD-ROM for the unit:
  - Teacher resource 5.ppt, *A guide to using FrontPage Express*
  - Teacher resource 9.ppt, *A slide presentation for lesson 8*
  - hswanim2.gif, *A sample logo*
  - one.css, *Sample style sheet 1*
  - two.css, *Sample style sheet 2*
  - three.css, *Sample style sheet 3*
  - four.css, *Sample style sheet 4*
  - 8.2 homework tasks.pdf, *Homework tasks*
- Pupil resources from the CD-ROM for the unit:
  - Pupil resource 6.pdf, *A guide to using style sheets*
  - Pupil resource 10.pdf, *Key vocabulary sorting cards*

## Lesson outline

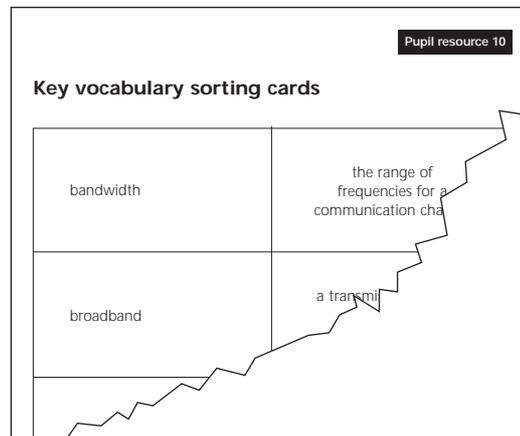
**60 minutes**

<b>1</b>	<b>Starter: Revising definitions of key vocabulary</b>	Whole class Group activity	10 minutes
<b>2</b>	<b>Completing the pages and creating the website</b>	Group activity	40 minutes
<b>3</b>	<b>Plenary: Evaluating the unit</b>	Small-group discussion Whole-class discussion	10 minutes
	<b>Homework: Setting personal targets</b>	Individual work	

# Activities

Before the start of the lesson:

- if you have not already done so, load **Teacher resource 9.ppt**, ready to show on the large display;
- put out on tables the envelopes containing the shuffled sets of key vocabulary sorting cards created from **Pupil resource 10.pdf**, one envelope for each group of four.



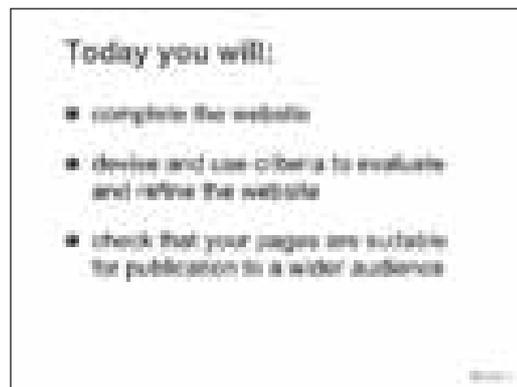
10 minutes

## 1 Starter: Revising definitions of key vocabulary

Ask pupils to sit at the tables in their groups of four.

Tell pupils that in this lesson they will be completing and evaluating their project to create a website for a 'virtual' visit to the school. Show **slide 1** from Teacher resource 9.ppt to explain the lesson's objectives.

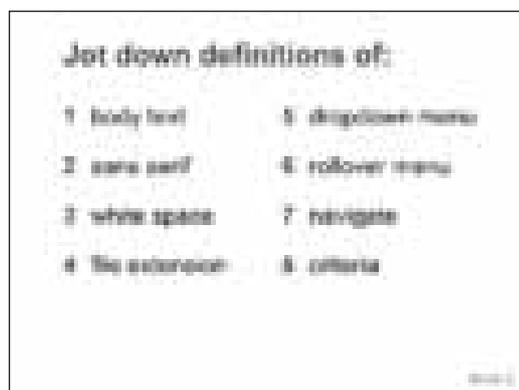
### Slide 1



Tell pupils that in their envelopes there are some cards with 20 of the key terms they have used in this project, together with their definitions. Tell them that they have 5 minutes to match each term to its definition.

Encourage all the groups to finish. If any finish early, show **slide 2** of Teacher resource 9.ppt and ask them to jot down definitions of the terms on the slide.

## Slide 2



Check pupils' understanding of the more difficult technical terms before going on to the next activity.

40 minutes

## 2 Completing the pages and creating the website

Remind pupils of the purpose of the site, a virtual visit to the school for parents, new pupils and other visitors.

Ask pupils:

- What criteria shall we use to judge the effectiveness of our website?

If necessary, prompt them by reminding them about the work they have done in their earlier lessons, asking them to think about the design of the pages, the structure of the site and the quality of information included. From their suggestions, draw out the following criteria.

- **Criteria for the design of the website pages**

*There is sufficient space between objects on the page.*

*The size and position of an object are appropriate for its relative importance.*

*The images and any sounds selected for the page are relevant.*

*The layout and use of colour would be attractive to an adult.*

- **Criteria for the structure of the site**

*It is easy to navigate and find your way around.*

*Menus and hyperlinks help you to find the information that you want.*

- **Criteria for the quality of Information**

*The information is comprehensive, up to date and clear.*

*The language used is easy to understand.*

*The information matches the needs of parents, new pupils and other visitors.*

Say that the groups of four will now have a few minutes to put the finishing touches to their pages, keeping in mind the criteria they have developed. Show **slides 3 and 4** of Teacher resource 9.ppt to illustrate the criteria.

### Slide 3

Criteria for our pages

- There is enough space between objects
- The size and position of objects are appropriate for their importance
- Images and any sounds are relevant
- Adults would like the use of colour
- Pages are easy to navigate

### Slide 4

Criteria for our pages

- Manual and hyperlinks help to find information
- Information is clear and up to date
- The language is easy to understand
- Information includes the needs of parents, new pupils and other visitors

Remind the class that they need to acknowledge the source of any information they have used, if it is not their own original work. Prompt them to make sure the front page of their section has a link back to the home page for the whole site, reminding them where the main home page is stored and how to do this.

Allow about 10 minutes for this. While the groups are working, circulate and challenge pupils to justify their choice of information and its fitness for the purpose of the site. Ensure that the groups test their links.

Bring the whole class together for a demonstration and discussion of the whole website and each section. Allow about 20 minutes for this. Invite groups to demonstrate their sections to the rest of the class. Ask those observing to comment on how closely the information in each section matches the needs and expectations of each visitor: a pupil new to the school, a parent, a prospective teacher, a member of a local community group.

Conclude the demonstration by asking the class:

- If we had more time, what features of our site could we still improve?

10 minutes

### 3 Plenary: Evaluating the unit

Ask pupils, in their groups of four, to discuss how effectively they think they worked as a group. Allow 2 to 3 minutes. Ask them to reflect on the extent to which the group as a whole worked collaboratively and allocated tasks fairly.

Bring the whole class together. Show **slides 5, 6 and 7** of Teacher resource 9.ppt to illustrate the learning objectives for the whole unit. Ask pupils to comment on how far they think each objective has been met.

### Slide 5

Objectives for Unit 8.2

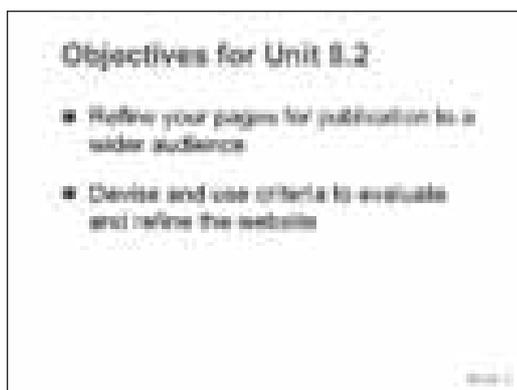
- Use diagrams to design a website
- Use a range of ICT resources to create web pages, containing text, images and sounds
- Take account of the interests and needs of users of the site

### Slide 6

Objectives for Unit 8.2

- Format the pages automatically, recognising some advantages of automatic formatting
- Think about technical issues that affect electronic communications

## Slide 7



Conclude the unit by asking questions such as:

- Which part of the unit did you find the most straightforward? Why?
- Which part did you enjoy the most? Why?
- Which part challenged you the most? Why?
- What new skills, knowledge or understanding have you gained from this unit of work?
- What skills, knowledge or understanding do you still need to improve?

## Homework : Setting personal targets

Set this task.

### Evaluating your own work

Evaluate how effectively you have worked during the eight lessons of this unit. Write your evaluation under these headings:

- what you learned;
- the extent to which your web page met the needs and interests of the users of our website (parents, new pupils, other visitors);
- the extent to which you were satisfied with the design of your web page;
- how well you made use of the range of the software available to you (the web page creation package, the style sheets, the web browser and your access to the Internet);
- how effectively you used other ICT resources available to you (digital camera, scanner);
- how well you collaborated with others.

Finish your evaluation by setting a personal target for yourself about how you will improve your work in the future.