

Unit 9 Publishing on the web

About the unit

In this unit pupils learn how to design and build an interactive web page, on a subject of their choice, that can be published on the worldwide web or school intranet. They learn how to control on-screen events and the flow of information accessed through a web page. They learn that web pages are made up of objects, and that these objects can be programmed to carry out actions, *eg a hyperlink can automatically connect a user to a different website, or an area of the screen can be programmed to change when a mouse pointer is passed over it.*

They consider a range of audiences, and how one site can serve a range of needs, *eg a site dedicated to a historic town may contain a list of places of interest for the casual tourist, while also offering detailed primary source material for the more serious historian.*

This unit is expected to take approximately 7 hours.

Where the unit fits in

This unit links with unit 2 ‘Information and presentation’ and unit 8 ‘Public information systems’, which introduce the idea of the internet as a vast store of data, and encourage pupils to use this resource to research information on specific topics.

Expectations

At the end of this unit

most pupils will: create a web page that includes graphics and hyperlinks to other areas within the same page, it will contain at least one graphic and should include coherent content about a subject of the pupil’s choice; use information from a variety of sources and present this information in different forms and styles for specific purposes and audiences; develop a set of instructions that control the links and automatic functions of their page; reflect critically in order to make improvements

some pupils will not have made so much progress and will: create a web page that includes graphics – the document will be about a simple subject; understand the needs of an audience; show evidence of using instructions to control events

some pupils will have progressed further and will: use automated routines to control events on their page to make the contained information more accessible to a range of users, *eg areas of the screen that change in response to mouse movements*; present their ideas in a variety of ways showing a clear sense of audience; refine their work to enhance its quality

Prior learning

It is helpful if pupils have:

- searched for information on the web, and are familiar with the nature and variety of information that can be found on a web page
- a basic understanding of control and automation, although this will have been in the context of physically controlling an external event, *eg work that may have been covered in unit 6 ‘Control: input, process and output’*

Language for learning

Through the activities in this unit pupils will be able to understand, use and spell correctly vocabulary relating to web publishing, *eg intranet, hypertext mark-up language (HTML), hyperlink, data warehouse, information flow.*

Resources

Resources include:

- internet or intranet access
- web-publishing software that uses tables, or word processing, or desktop-publishing software with web capabilities
- graphics software that includes animation for web function

Pupils should learn:

Pupils:

Activity 1

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| <ul style="list-style-type: none"> • that the format of information on the internet is presented in a different way from that on paper • that the ways in which this information is accessed is largely determined by the design of the page • that one web page can serve a range of audiences | <ul style="list-style-type: none"> • Ask the pupils to work in groups to discuss the differences between a web page and printed material. Explain the basic linear nature of printed material, and the dynamic nature of web-based pages. • Draw out that good design is essential for both media. Ask the pupils to draw up a table of points to consider when discussing what makes good design. • Explain that different links can be created to suit different audiences reading the same page. Pupils should then compare three different websites, each chosen for their differences; one might include video. | <ul style="list-style-type: none"> • understand that the design of pages can influence the data that is accessed by users • understand that web pages can be designed for different audiences | <ul style="list-style-type: none"> • This unit begins by focusing on all pupils doing the same page design and linking pages with different content. |
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Activity 2

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| <ul style="list-style-type: none"> • that web pages can be created using a range of software tools • that a range of tools needs to be used to construct a web page that will be automatic and interactive • to make decisions about structure | <ul style="list-style-type: none"> • Give the pupils a simple web page that includes a heading, a background colour, text, an image and a simple link between sections of the document. Ask the pupils to change various aspects of the document, demonstrating how the web authoring software converts to HTML. • Explain to pupils how to use a relevant piece of software to: <ul style="list-style-type: none"> – create headings and text – create a background (colour or graphics) – insert graphics – create tables • Explain to pupils how to use a common core of fonts and how to make decisions about structure. | <ul style="list-style-type: none"> • use software to create web pages • use software tools to create features unique to interactive documents | <ul style="list-style-type: none"> • The teacher-produced page should include a heading, background colour, text, an image and simple links to other sections of the document. It should be controlled by a table. • The type of software used will depend on the tools available within a particular school. • Activities 2–4 might involve groups of pupils working together to link their pages. • It is likely that more than one tool will need to be used. Pupils could consider the difference between a dedicated web publisher and a subset of functions within another software tool. Introduce pupils to the importance of naming conventions, <i>eg lower case</i>, and to techniques of converting between GIF and JPEG files. Pupils will need to understand why these conversions are made, <i>eg transparency, number of colours</i>. |
| <ul style="list-style-type: none"> • that a web page is created using a programming language | <ul style="list-style-type: none"> • Examine a simple web page, and the associated code. Explain that pages can be written by using HTML and show pupils the code. | <ul style="list-style-type: none"> • recognise HTML code is used to produce many web pages | <ul style="list-style-type: none"> • HTML should be demonstrated as the transfer code – composed of elements, <i>eg text, images, speed effects</i>. |

Learning objectives

Pupils should learn:

Possible teaching activities**Learning outcomes**

Pupils:

Points to note**Activity 3**

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| <ul style="list-style-type: none"> • that objects can be programmed to carry out actions • that objects can be programmed to respond automatically to events | <ul style="list-style-type: none"> • Explain to pupils how to use a relevant piece of software to: <ul style="list-style-type: none"> – create links – produce simple animations – create hover buttons and other simple automated routines | <ul style="list-style-type: none"> • create a web page made up of a series of objects • program objects to carry out a range of actions | <ul style="list-style-type: none"> • Animation is best taught through a dedicated graphics package that includes an appropriate facility. • It is assumed that automated routines will be created using software tools, and not through programming languages. |
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Activity 4

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| <ul style="list-style-type: none"> • how to add links on and between web pages | <ul style="list-style-type: none"> • Explain that when designing a web page a holistic approach needs to be adopted and that links both backwards and forwards must be considered during the design phase. Explain that different sets of links can be designed to suit the needs of different users. | <ul style="list-style-type: none"> • add appropriate links to pages |
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Activity 5

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| <ul style="list-style-type: none"> • to design web pages based on a personal interest • the need to adopt a holistic approach to web page design • to think about the audience for whom the page is created • to reflect critically on their work and use this evaluation to improve it • about the responsibility of publishing on the internet | <ul style="list-style-type: none"> • Discuss suitable subjects for a web page, and the range of audiences that the page could be produced for. • Ask the pupils to produce spider charts that consider subjects, contents and audience. • Ask pupils to decide on their topic, and to write a simple brief. Pupils could work on a common theme in groups of five and then arrange links between their pages. Ask pupils to draw a chart that represents the various sections and the links between them. • Ask pupils to create their pages using the tools previously introduced. • Encourage pupils to develop a system for the evaluation of their pages, through asking questions of others who have accessed their site. • Discuss the aspects of responsibility of publishing work on the internet. Topics to be addressed should include libel, plagiarism, sensitivity to others, acknowledging sources and authorship. Pupils should be asked to present an argument about why their pages should be published on the internet before proceeding. • Post the final pages to the school intranet. | <ul style="list-style-type: none"> • understand that it is important to consider purpose and aims when designing a web page • create content suitable for the intended audience • design and produce web pages linked to others • evaluate their work and use this to improve it • present arguments about publishing responsibly | <ul style="list-style-type: none"> • The page should include a background colour image, at least two images, and at least three internal links. • Pupils could design web pages with links and content for more than one audience. |
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