

# Unit 20: Web authoring (LEVEL 3)

## Learning outcomes

By completing this unit candidates will develop a thorough knowledge and understanding of how to plan, design and build a functional working website.

Candidates will produce evidence to meet the unit assessment objectives in order to show that they understand:

- analyse existing websites to help their website design
- how website accessibility affects a website
- how to effectively plan the creation of a website that is fit for purpose
- how to build a website they have designed
- how to test a website they have created
- how to upload the website to the Internet
- how to evaluate a website they have created.

**It is anticipated that a candidate will require 60 guided learning hours to complete this unit.**

Assessment objectives	Knowledge, understanding and skills
1 Investigate website accessibility	Investigate: <ul style="list-style-type: none"><li>• factors affecting web accessibility<ul style="list-style-type: none"><li>◦ people with disabilities eg visual, physical</li><li>◦ social factors eg language barriers</li><li>◦ legal and policy factors eg requirements from governments</li><li>◦ technical factors eg slow Internet connection</li></ul></li><li>• what systems there are to ensure web accessibility eg alt tags, alternative content, alter text size, alter colours used, image file size</li></ul>
2 Analyse existing websites	Review existing website: <ul style="list-style-type: none"><li>• to obtain ideas</li><li>• design, layout</li><li>• use of multimedia features</li><li>• use of interactive features</li><li>• use of features to aid website accessibility</li></ul> Websites reviewed should cover a variety of subjects: eg <ul style="list-style-type: none"><li>• eCommerce</li><li>• promotional sites</li><li>• educational sites</li></ul>
3 Plan and develop a website	Planning a website of at least 10 pages to include: <ul style="list-style-type: none"><li>• an Action Plan</li><li>• identified purpose and target audience for the website</li><li>• a site plan for the new website</li><li>• storyboards/detailed page plans showing the layout of different components and an appropriate navigation system</li><li>• interactive and multimedia features</li></ul> (continued overleaf)

Assessment objectives	Knowledge, understanding and skills
3 Cont.  Plan and develop a website	<ul style="list-style-type: none"> <li>• features to enhance the site's accessibility</li> <li>• meta tags</li> </ul> Candidates need to collect and store suitable components for their website, to include, eg images, text, animations, interactive elements, video, sound, objects to be linked
4 Implement a website	Set up suitable directory structure for the website, using subdirectories and appropriate filenames throughout Keep copies of work on a suitable backup device Create a website that is fit for purpose: <ul style="list-style-type: none"> <li>• produce a template and website that adheres to the chosen house style</li> <li>• use cascading style sheets (css)</li> <li>• insert/import and align text</li> <li>• format text and colour to the chosen house style</li> <li>• set text attributes (size, colour, appearance)</li> <li>• use tables, setting dimensions and alignment</li> <li>• use a range of different components, eg images, animations, rollovers</li> <li>• interactive elements, video, sound</li> <li>• understand relative and absolute links</li> <li>• create a range of internal and external hyperlinks</li> <li>• use a range of targets eg blank, self</li> <li>• features to enhance the site's accessibility</li> </ul>
5 Test a website	Create a test plan to fully test the website to ensure that the following work effectively: <ul style="list-style-type: none"> <li>• suitability for target audience</li> <li>• purpose of website</li> <li>• use of consistent house style</li> <li>• navigation system</li> <li>• use of different components</li> <li>• interactive elements</li> <li>• hyperlinks</li> <li>• browser compatibility</li> <li>• images</li> <li>• ease of use</li> <li>• website's accessibility features</li> </ul> Respond to any issues by making necessary changes. Highlight changes on pages by printing code view and/or screenshots, clearly identifying alterations made
6 Upload a website	Investigate: <ul style="list-style-type: none"> <li>• prototype testing</li> <li>• domain name registering</li> <li>• file and folder names and organisation</li> <li>• use of a file exchange program, such as ftp or http to publish website</li> </ul>

Assessment objectives	Knowledge, understanding and skills
7 Evaluation of own website	Investigate: <ul style="list-style-type: none"> <li>• quality of website, eg suitability for purpose and audience,</li> <li>• content, readability (use of colour, language)</li> <li>• usability (navigation, ease of use) and accessibility (use of ALT tags for images)</li> <li>• links, browser compatibility</li> <li>• user feedback, how did they find you website to use</li> <li>• strengths/weaknesses in own working practices/approach</li> </ul>

## Assessment

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This unit is centre assessed and externally moderated.

In order to achieve this unit, candidates must produce a portfolio of evidence showing that they have met all of the assessment objectives.

Portfolios of work must be produced independently. They will need to be made available, together with witness statements and any other supporting documentation, to the OCR Visiting Moderator when required.

Centres must confirm to OCR that the evidence produced by candidates is authentic. An OCR Centre Authentication Form is provided in the Centre Handbook and includes a declaration for assessors to sign. It is a requirement of the QCA Common Criteria for all Qualifications that proof of authentication is received.

## Guidance on assessment and evidence requirements

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Candidates may provide portfolio evidence for this unit using a range of suitable and appropriate techniques. These may include written data, the use of video, audio presentation and electronic files within the body of the portfolio and display evidence. Where presentations or displays have taken place for which evidence cannot be easily included within the portfolio evidence assessor testimony/witness statements must be included, signed by the assessor(s), and supported by appropriate evidence (handouts, slides etc).

This unit can be integrated with others. Candidates may wish to enhance their work by the inclusion of other units of work such as creating video, sound, animation, digital imaging and computer graphics. This work will not be assessed as part of this unit. However, the candidate's website work may be used to display work from other units; in which case, the website must be saved, presented/printed accordingly.

Where the term HTML is used variants thereof (XHTML, asp, XML etc) are also acceptable.

The use of web-authoring software should be encouraged, or HTML coding. It is not appropriate to produce this work using desktop publishing or word-processing software and simply saving the final products as HTML.

The assessment objectives (AOs) must be assessed separately, however they might not be carried out separately in discrete units of work.

For Assessment Objective 1, candidates must show an understanding of the issues surrounding accessibility to websites. At Pass level candidates will simply provide evidence to show they have limited understanding of one of the factors affecting accessibility. They will also identify some of the solutions that can be used to aid accessibility but they may not match issues and solutions. At Merit/Distinction level candidates will show a better understanding of website accessibility and will be able to describe in more details the solutions to accessibility issues.

For Assessment Objective 2, candidates must show evidence of having researched existing websites from a variety of subjects. At Pass level candidates would only discuss the features used on these websites eg text, images, tables, forms and interactive features. At Merit/Distinction level candidates will explain the features used on existing websites and discuss how they have given or not given them ideas for their own website.

For Assessment Objective 3, candidates should be advised to create a website on a subject matter they are interested in; this will ensure they have an interest in what they are creating. An action plan must be created to list tasks to be carried out and timeframes for starting and finishing these tasks. The proposal for the new website should have an identified purpose and target audience. The basic site plan should be one page showing all pages and navigation. The page plans will show a varying amount of detail. Storyboards should be created for each page identifying features such as filenames used, page titles, text style, images to be used and layouts. Candidates should consider website accessibility and plan to include features within their website that meet some accessibility considerations eg allow text size to be altered, level of language and use of colour.

Candidates are required to collect relevant material for their own website. It is acceptable for multimedia components to be obtained from a range of sources for use on their website, but candidates should identify source material, demonstrating that they understand copyright and ownership of assets. They can also create components themselves; using skills they already have or have learned as part of other units.

For Assessment Objective 4, candidates need to create an appropriate website. They should produce a template and cascading style sheet using a consistent house style. A website should be created from this consisting of a homepage and at least nine other pages. Web pages should include a variety of multimedia components, including as a minimum text and images. Candidates must proofread and correct their work, so that mistakes are minimised. Hyperlinks should be included as part of the navigation system. If navigation bars are included, they must be printed on page, using a consistent layout. The use of tables or frames to layout the contents of the pages may be used for Merit/Distinction candidates. The evidence for this assessment objective would probably be best provided in electronic format.

For Assessment Objective 5, all web pages must be tested. Testing should be carried out using a Test Plan/Table and should cover a range of different features, including all hyperlinks, images, multimedia and accessibility features. Candidates should create their own test plan/table. Test evidence should be in both the test table and screenshot evidence. Candidates of Merit/Distinction level should show that they have actioned and fixed problems that testing has highlighted. Candidates can include annotated code or screenshots to demonstrate this taking place, before and after evidence can also be used to exemplify the changes made. Problems that need to be fixed should not be invented.

For Assessment Objective 6, candidates must show evidence that they have investigated how they would upload their website to the Internet. At Pass level candidates will simply identify an ISP and identify a domain name for their website. At Merit/Distinction level candidates will research a number of ISP's and explain their facilities and select a domain name with reasons for the choice. However, it is likely that candidates will not be able to use the domain name/ISP of their choice due to restrictions within the Centre. At Distinction level candidates will also show evidence of uploading their website to the internet.

For Assessment Objective 7, candidates must produce an evaluation of their own work; suitability for purpose and audience, content, readability (eg the choice of font and font size, colour, language) and usability (eg navigation and ease of use). Candidates should analyse their strengths and weaknesses in building their website taking into account any comments received from users. Candidates will suggest how they could improve both their website and their performance. Candidates will provide an analysis of their approach to designing, building and testing the website, suggesting refinements to their approach in the future.

## Signposting to Key Skills

- ✓ The unit contains opportunities for developing the Key Skill, and possibly for generating portfolio evidence, if teaching and learning is focused on that aim. Assessing staff will need to check each candidate's evidence against the specifications to ensure all evidence requirements have been met. Additional evidence may also be required.

Key Skill reference		Key Skill reference		Key Skill reference	
C3.1a	✓	N3.1		ICT3.1	✓
C3.1b	✓	N3.2		ICT3.2	✓
C3.2	✓	N3.3		ICT3.3	✓
C3.3	✓				

## Mapping to National Occupational Standards

Occupational Standards (e-skills UK)	Title
IT Users	Make selective use of IT
IT Users	Operate a computer
IT Users	Website software
IT Professional Contact Centres Telecommunications	Develop personal and organisational effectiveness
IT Professional Contact Centres Telecommunications	Interpersonal and written Communication
IT Professional	Managing software development
IT Professional Telecommunications	Quality management of ICT products and services
IT Professional Telecommunications	System operation
IT Professional Telecommunications	Testing ICT systems
IT User (for export to other sectors)	General uses of IT
IT User (for export to other sectors)	Purposes for using IT
IT User (for export to other sectors)	Use IT software
IT User (for export to other sectors)	Use IT systems
IT User (for export to other sectors)	Use IT to exchange information

## Resources

This section provides suggestions of suitable resources. The list is neither prescriptive nor exhaustive, and candidates should be encouraged to gather information from a variety of sources. Some suggested resources are intended for Tutor use. The resources in this section were correct at the time of production.

## Websites

Introduction to Web Accessibility. [URL:http://www.w3.org/WAI/intro/accessibility.php#i-what](http://www.w3.org/WAI/intro/accessibility.php#i-what)

Accessibility101. [URL:http://www.accessibility101.org.uk/index.htm](http://www.accessibility101.org.uk/index.htm)

Web Accessibility Tools. [URL:http://www.userfocus.co.uk/resources/accesstools.html](http://www.userfocus.co.uk/resources/accesstools.html)

Digital Media Access Group. [URL:http://www.dmag.org.uk/default.asp](http://www.dmag.org.uk/default.asp)

## Grading

Assessment Objective	Pass	Merit	Distinction
<b>A01</b> Investigate website accessibility	Candidates outline <b>briefly</b> at least <b>one</b> factor affecting accessibility of websites; define accessibility and how it can be achieved.	Candidates outline <b>clearly</b> at least <b>two</b> different types of factors affecting accessibility of websites. They <b>describe</b> some of the systems that can help website accessibility.	Candidates outline <b>clearly</b> at least <b>three</b> different types of factors affecting accessibility of websites. They <b>describe</b> the systems that can help website accessibility, <b>explaining how</b> , and clearly link these back to the original factors outlined.
<b>A02</b> Analyse existing websites	Candidates comment on the features of a variety of different websites and <b>explain</b> how they have provided ideas for their own websites. They outline <b>briefly</b> at least <b>two</b> different systems that have been used to aid website accessibility.	Candidates comment on the features of a variety of different websites and <b>explain clearly</b> which features they will consider using in their website. They outline <b>clearly</b> at least <b>three</b> different systems that have been used to aid website accessibility and <b>identify</b> at least <b>one</b> of these methods that they intend to use in their own site.	Candidates <b>critically evaluate</b> a variety of websites identifying features that have provided them with ideas for their own website. They <b>give reasons</b> for inclusion of such features in their website. They outline <b>in full</b> at least <b>four</b> different systems that have been used to aid website accessibility and <b>identify</b> at least <b>one</b> of these methods that they intend to use in their own site.
<b>A03</b> Plan and develop a website	Candidates produce a <b>brief</b> plan of the website they intend to build. This will include details of purpose and target audience. They list <b>a feature</b> that they will use to help website accessibility.  They produce <b>a list</b> of tasks to be carried out, mind maps and <b>simple</b> page plans for the website including <b>possible use</b> of links	Candidates produce a <b>detailed</b> proposal for the website they intend to build; this will include purpose and target audience details. They provide a <b>clear</b> explanation for the inclusion of at least <b>two</b> features that will help website accessibility.  They produce an <b>action plan</b> that has <b>some</b> details completed eg task details and expected start/finish dates.  <b>Detailed</b> page plans will be created as well as a site plan and identification of all links.	Candidates produce a <b>comprehensive</b> proposal for the website they intend to build. This will include purpose and target audience. They provide a <b>detailed</b> explanation for the inclusion of at least <b>three</b> features that will help website accessibility.  They produce a <b>detailed</b> action plan that shows <b>all</b> tasks to be completed, dates and actions  <b>Thorough</b> page plans will be created as well as a detailed site plan. <b>All</b> links and objects to be linked will be clearly shown. These plans will <b>all</b> be accurate.

Assessment Objective	Pass	Merit	Distinction
<p><b>AO4</b> Implement a website</p>	<p>Candidates implement a <b>basic</b> directory structure for the website.</p> <p>Candidates show <b>basic</b> competence in producing a website of at least 10 pages containing text, images and additional components using a <b>basic</b> template they have created themselves.</p> <p>There <b>may be</b> errors in the text, but meaning will be clear.</p> <p>The images and components must be suitable for purpose.</p> <p>A method of navigation to all pages is evident.</p> <p>They include <b>one</b> feature that they will use to help website accessibility.</p> <p>Web pages are printed from a web browser, <b>some</b> content may be missing.</p>	<p>Candidates implement a <b>sound</b> directory structure for the website.</p> <p>Candidates produce a website of at least 10 pages containing text with appropriate styles applied for headings and body text, images and a range of additional components using either a template they have made or css.</p> <p>Meaning will be <b>clear</b> but there <b>may be some</b> errors.</p> <p>The images and components must be suitable for purpose.</p> <p>A <b>good</b> method of navigation to all pages is evident.</p> <p>They include <b>two</b> features that they will use to help website accessibility</p> <p>Web pages are printed from a web browser. <b>All</b> content is shown.</p>	<p>Candidates implement a <b>good</b> directory structure for the website.</p> <p>Candidates produce a <b>high quality</b> website of at least 10 pages using css. The website includes a <b>range</b> of additional components and interactive elements.</p> <p>Meaning will be <b>clear</b> and there will be <b>minimal</b> textual errors.</p> <p>A <b>good range</b> of suitable images and components will be evident. Image optimisation will be evidenced in the form of a screenshot which clearly shows image size has been altered for all files used.</p> <p>A <b>good method</b> of navigation to all pages is evident.</p> <p>They include <b>three</b> features that they will use to help website accessibility</p> <p>Web pages are printed from a web browser. <b>Whole</b> pages will be displayed.</p>
<p><b>AO5</b> Test a website</p>	<p>Candidates <b>create</b> a test plan/table covering all pages in the site and carry out <b>some</b> tests.</p>	<p>Candidates test their website using a <b>detailed</b> test table.</p> <p>The tests cover <b>all</b> the main areas of their website and all tests are appropriate. Candidates test every page and provide annotated code or screen shots highlighting before and after changes where appropriate</p>	<p>Candidates test their website using a testing table.</p> <p>The tests are <b>appropriate</b> and <b>comprehensive</b> and will cover all areas of their website.</p> <p>The test table indicates action that is required to solve any problems.</p> <p>Candidates test every page and provide annotated code or screen shots highlighting before and after changes where appropriate.</p>

Assessment Objective	Pass	Merit	Distinction
<p><b>AO6</b> Upload a website</p>	<p>Candidates show evidence of having researched at least <b>one</b> ISP, of what the ISP will provide and how it benefits the user.</p> <p>Candidates show evidence of using a file exchange program to upload their website to the internet for viewing.</p> <p>They choose a domain name for their website and explain their choice.</p>	<p>Candidates show evidence of having researched at least <b>two</b> ISPs showing <b>detailed</b> evidence of what facilities the ISP will provide and how they benefit the user.</p> <p>Candidates show evidence of using a file exchange program to upload their website to the internet for viewing.</p> <p>They choose a domain name for their website and explain their choice.</p>	<p>Candidates show evidence of having researched at least <b>three</b> ISPs showing detailed evidence of what facilities the ISP will provide and how they benefit the user.</p> <p>Candidates show evidence of using a file exchange program to upload their website to the internet for viewing.</p> <p>They choose a domain name for their website and explain their choice.</p>
<p><b>AO7</b> Evaluation of own website</p>	<p>Candidates produce a <b>brief</b> evaluation of their work. This covers: suitability of the website for purpose and audience (as identified by the candidate) and readability of the website; candidates will support their comments with examples taken from their website.</p> <p>They give <b>limited</b> examples of their own strengths and weaknesses.</p>	<p>Candidates produce a <b>detailed</b> evaluation of their work. This covers: suitability of the website for purpose and audience (as identified by the candidate), readability and usability; candidates will support their comments with examples taken from their website.</p> <p>They give <b>detailed</b> examples of their own strengths and weaknesses.</p>	<p>Candidates produce an <b>extensive</b> evaluation of their work. This covers: suitability of the website for purpose and audience (as identified by the candidate), readability, usability and accessibility; candidates will support their comments with examples taken from their website.</p> <p>They give <b>thorough</b> examples of their own strengths and weaknesses.</p>