XSQA

UNIT Computing: Digital Media Elements for Applications
(SCQF level 6)

CODE F3SW 12

SUMMARY

This Unit is designed to enable candidates to acquire digital media elements of various types and use them within multimedia applications. Candidates will learn how to use a range of hardware devices for the capture of media elements and develop the knowledge and skills to be able to modify these using software. They will also learn how to legitimately source digital media elements and how to create some themselves using software. The digital elements covered will include still images, digital audio and digital video clips, and the Unit will cover the relevant file formats for storing each type. This Unit will also provide candidates with the knowledge to plan a multimedia presentation containing a range of digital media elements.

This Unit is suitable for candidates with basic skills and/or knowledge of digital media elements and who wish to extend them further.

OUTCOMES

1 Plan a multimedia application to meet the requirements of a given brief.
2 Obtain, edit and store digital media elements to meet the requirements of a given brief.
3 Create and evaluate a multimedia application to meet the requirements of a given brief.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained the following, or equivalent:

♦ F1KS 11 *Computing: Digital Media Elements for Applications*
♦ Intermediate 2 *Multimedia Applications*

Administrative Information

Superclass:	CB
Publication date:	July 2008
Source:	Scottish Qualifications Authority
Version:	01

Additional copies of this Unit Specification can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre, telephone 0845 279 1000.

National Unit Specification: general information (cont)

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CREDIT VALUE

1 credit at Higher (6 SCQF credit points at SCQF level 6*).

*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.

CORE SKILLS

While there is no automatic certification of Core Skills in this Unit there may be opportunities for developing aspects of Core Skills.

National Unit Specification: statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Plan a multimedia application to meet the requirements of a given brief.

Performance Criteria

(a) Identify a range of different digital media elements to meet the given brief
(b) Describe the provider, devices and software tools that will be used to obtain the range of identified digital media elements
(c) Produce a layout for incorporating the identified digital elements in the multimedia application to meet the given brief

OUTCOME 2

Obtain, edit and store digital media elements to meet the requirements of a given brief.

Performance Criteria

(a) Acquire a digital media element from a provider to meet the requirements of the given brief
(b) Capture digital media elements using digital devices to meet the requirements of the given brief
(c) Create digital media elements using software tools to meet the requirements of the given brief
(d) Edit digital media elements using software tools to meet the requirements of the given brief
(e) Store digital media elements using appropriate file formats and storage media

OUTCOME 3

Create and evaluate a multimedia application to meet the requirements of a given brief.

Performance Criteria

(a) Incorporate the range of stored digital media elements into a multimedia application as identified in the layout
(b) Test the functionality of each element in the completed multimedia application
(c) Evaluate the completed multimedia application against the given brief and defined criteria
(d) State the copyright status for the digital media elements incorporated in the multimedia application

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that candidates meet the requirements of all the Outcomes and Performance Criteria. Written and/or oral recorded evidence and product evidence is required to demonstrate that the candidate has achieved all the Outcomes and Performance Criteria.

For **Outcomes 1, 2 and 3** the candidate must be provided with a brief for a multimedia application involving digital media elements. This brief must require the multimedia application to have the following:

♦   digital media elements covering the types: text, audio and image (still or moving)
♦   at least one digital media element to be acquired legitimately from a provider
♦   at least two digital media elements to be captured, each from a different digital device
♦   at least two digital media elements to be created, each by a different software tool
♦   a statement of the source and copyright status of each element incorporated in the multimedia application
♦   name and store the original (unedited) and final (edited) versions of the digital media elements and the final version of the multimedia application

For **Outcome 1**, written and/or oral recorded evidence is required which lists the digital media elements to be acquired, their type and source. Information about the source for each digital element must be either the provider details, or the device to be used for its capture, or the software tool to be used for its creation. Further, a storyboard or similar layout is required that details the layout and position of the digital media elements in the multimedia application, to meet the requirements of the brief.

Product and written and/or oral recorded evidence is required for **Outcome 2.** The product evidence will comprise all of the digital elements listed in Outcome 1, including:

♦   at least one element that has been acquired from a provider
♦   at least two elements that have been captured, each using a different digital device
♦   at least two elements that have been created, each using a different software tool
♦   the named and stored file for each element using an appropriate file format
♦   at least one of each of the following created by editing an original element: text, digital audio clip, digital image (either still or moving)
♦   the named and stored file for the post-edit version of each edited element using an appropriate file format

The written and/or oral recorded evidence will be an assessor observation checklist to confirm that the elements have been obtained using the specified provider, devices and software tools, and edited and stored with appropriate formats and file names. The assessor observation checklist should be completed at appropriate points throughout the Unit.

National Unit Specification: statement of standards (cont)

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For **Outcome 3** product and written and/or oral recorded evidence is required. The product evidence will be:

♦ the multimedia application displaying the incorporated digital media
♦ the completed test log

The written and/or oral evidence for **Outcome 3** will be a completed pro forma which:

♦ evaluates the completed multimedia application against the given brief under the headings of: content, implementation, functionality and overall impact
♦ states the copyright status for each digital element incorporated in the application

This pro forma will be provided by the centre.

The evidence can be gathered throughout the Unit. Assessment must be conducted under supervised, open-book conditions. Candidates may have access to on-line resources and reference materials. The assessor must assure themselves of the authenticity of the candidate's evidence.

The Assessment Support Pack for this Unit provides a sample candidate brief and evaluation pro forma, exemplar candidate plan, and individual digital media files. The completed multimedia presentation and exemplar completed evaluation pro forma will also be included. Centres wishing to develop their own assessments should refer to the Assessment Support Pack to ensure a comparable standard.

National Unit Specification: support notes

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This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit is a mandatory Unit within the National Certificate in Digital Media Computing, but can be taken as a free-standing Unit by any candidate who wishes to further their knowledge and skills in the creation and use of digital media elements.

The overall aim of this Unit is to give candidates the skills and knowledge to be able to develop a short multimedia presentation incorporating a range of media elements that they have obtained by either acquiring from a legitimate source or capturing using a digital media device or creating using software. The candidate should be introduced to the software tools required to create, edit and manipulate digital elements and gain familiarity with the range of digital devices involved in capturing digital media elements.

Throughout this Unit, candidates must be exposed to a variety of hardware devices and software packages relevant to the media elements, through practical demonstrations and practical exercises. This will help to develop an understanding of what is used by specialists in the interactive media and web industries. Candidates should be introduced to more than one multimedia application, although the candidate may concentrate on the use of one authoring package to edit, manipulate/transform and publish media elements. Throughout the Unit candidates should gain the necessary skills to integrate the media elements into the chosen application for the multimedia application.

Typical devices for the capture of media elements would include: tape recorder, mobile phone, microphone and computer, video capture card, digital video camera, digital stills camera, scanner. Software tools for the creation and editing of media elements would include: vector graphics packages, 2D and 3D animation packages, audio packages (including MIDI), video editing packages, photo editing packages. Editing of media elements could cover: cut, copy, paste, duplicate, trim, alter amplitude, splice, clip, adding effects, filters and transitions.

Candidates should be aware that digital media elements can be stored in either editable (native) or published (interchangeable) formats such as PSD, PPT, JPEG, MP3, and WAV. The properties of these formats should be covered, as well as the nature of compression algorithms in common use. The implications of media selection for file storage should include magnetic, optical and flash technologies. Candidates should be made aware of the standard procedures and formats for establishing copyright, obtaining copyright clearance and acknowledging copyright.

Candidates should be introduced to a multimedia application that is capable of holding and displaying the range of digital elements acquired in this Unit. This could be a web application, or a presentation or an interactive application.

National Unit Specification: support notes (cont)

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GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

A practical hands-on approach to learning should be adopted to engage learners and exemplify key concepts. However, all practical activities should be underpinned with appropriate knowledge before candidates commence these activities. Candidates will require individual access to computer hardware and software throughout this Unit.

This Unit builds on the fundamental knowledge and skills for digital media elements and the use of their respective applications. Materials and practical tasks must be pitched at this level. The Unit should be taught on a holistic basis. Where possible ICT should be used to support the delivery of the Unit eg e-learning could help to tailor learning to suit the individual learning styles and pace of the candidates, or appropriate software could facilitate group work and collaborative working between candidates.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit candidates are required to interpret a given brief for a multimedia application. This is a good opportunity for developing aspects of the Core Skill in *Problem Solving* as well as aspects of the Core Skills in *Communication.* Candidates will also work collaboratively to set up computer hardware and software to capture video, sound and images thus providing opportunities to develop aspects of the Core Skill of *Working with Other.*

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by information and communications technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003), SQA Guidelines on e-assessment for Schools (BD2625, June 2005).*

An integrative approach should be taken with the three Outcomes being assessed through a given brief prepared by the centre. The brief should be issued to candidates early on in the Unit. The brief for the multimedia application should relate to a realistic requirement that has a recognisable context for the candidate group, but which allows scope for creativity.

National Unit Specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT (CONT)

Outcome 1 requires the candidate to interpret the brief and identify the range of digital media elements that will be required to satisfy the brief. The candidate should be guided towards the multimedia application most suitable for the brief and will draw up a layout for the incorporation of the elements into the multimedia application (eg web pages, presentation software, multimedia authoring). **Outcomes 2 and 3** require the candidate to gather together these media elements and integrate them into a multimedia application. The assessment for these Outcomes will be carried out under supervised conditions. Candidates will have access to notes, reference materials and online help for this assessment. The assessor observation checklist should be completed at appropriate points throughout the Unit.

In evaluating the completed multimedia application, candidates should consider the quantity and appropriateness of the digital media elements, the quality of the playback, system performance in playback and the overall impact of the application. The centre should provide candidates with a suitable pro forma for the recording of their evaluations and the statement of copyright for the digital media elements.

CANDIDATES WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).