

Specification

BTEC Specialist qualifications

Edexcel BTEC Level 3 Certificate in Creative and Digital Media (QCF)

Issue 2

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Our vocational suite of qualifications include NVQs, Apprenticeships, WorkSkills, Functional Skills, Foundation Learning, as well as our exclusive range of BTECs, from entry level right through to Higher National Diplomas.

This specification is Issue 2. Key changes are sidelined. We will inform centres of any changes to this issue. The latest issue can be found on the Edexcel website: www.edexcel.com

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Qualification title covered by this specification

This specification contains the information you require to offer the following qualification:

Qualification title	Qualification Accreditation Number (QAN)
Edexcel BTEC Level 3 Certificate in Creative and Digital Media (QCF)	500/9772/6

This qualification has been accredited within the Qualifications and Credit Framework (QCF) and is eligible for public funding as determined by the Department for Education (DfE) under Sections 96 and 97 of the Learning and Skills Act 2000.

The qualification title listed above features in the funding lists published annually by the DfE and the regularly updated website www.dcsf.gov.uk/. It will also appear on the Learning Aims Database (LAD), where relevant.

You should use the QCF Qualification Accreditation Number (QAN) when you wish to seek public funding for your learners. Each unit within a qualification will also have a unique QCF reference number, which is listed in this specification.

The QCF qualification title and unit reference numbers will appear on the learners' final certification documentation. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel.

Key features of the Edexcel BTEC Level 3 Certificate in Creative and Digital Media (QCF)

This qualification:

is a nationally recognised qualification

- is based on the Skillset National Occupational Standards (NOS)
- has been developed in collaboration with Skillset, the Sector Skills Council for the creative media sector.

The Edexcel BTEC Level 3 Certificate in Creative and Digital Media (QCF) has been approved as one of the components required for the Creative and Digital Media Apprenticeship framework.

What is the purpose of this qualification?

This qualification forms the knowledge component of the Advanced Apprenticeship in Creative Digital Media. The aim of the Apprenticeship is to develop employees who are digitally multi-skilled and able to work cross-platform. This qualification gives learners the opportunity to focus on specific aspects of knowledge that suit their intended progression route.

Who is this qualification for?

This qualification is for all learners aged 16 and above who are capable of reaching the required standards.

Edexcel's policy is that the qualification should:

- be free from any barriers that restrict access and progression
- ensure equality of opportunity for all wishing to access the qualifications.

What are the potential job roles for those working towards this qualification?

- Advertising Art Director
- Advertising Creative/Copywriter/Director
- Animator
- Broadcast Journalist
- Computer Games Designer
- internet/Web Professional
- Media Researcher
- Multimedia Designer
- Photographer
- Radio Producer
- Sound Engineer
- Sound Technician

- TV/Film Camera Operator
- TV/Film Director
- TV/Film Editor
- TV/Film Floor Manager
- TV/Film Producer
- TV/Film Production Assistant
- TV/Film Runner

How is this qualification graded and assessed?

The overall grade for this qualification is a pass. To gain a pass the learner must achieve all the required units within the specified qualification structure.

Learners must provide evidence of their competence for each learning outcome. This evidence can be provided through products of learners' work, observations, witness statements, simulation (where approved by the SSC), question and answers, expert witness statements etc.

Additional information on the assessment methodology for these qualifications is given in the section entitled 'What are the assessment requirements for these qualifications?'

What is the qualification structure for the Edexcel BTEC Level 3 Certificate in Creative and Digital Media (QCF)?

- 1 Qualification credit value: a minimum of 20 credits and a maximum of 30 credits.
- 2 Minimum credit to be achieved at the level of the qualification (level 3): 15 credits.
- 3 All units are optional.

Unit number	Unit title	Unit level	Unit credit
1	2D Digital Art for Computer Games	2	10
2	Media Audiences and Products	2	5
3	Photography Techniques	2	10
4	Print Production	2	10
5	Research for Creative Media Production	2	5
6	Video Production	2	10
7	2D Animation Production	3	10
8	3D Animation	3	10
9	3D Environments	3	10
10	3D Modelling	3	10
11	Advertisement Production for Television	3	10
12	Audio Production Processes and Techniques	3	10
13	Communication Skills for Creative Media Production	3	5
14	Computer Game Story Development	3	10
15	Creative Media Production Management Project	3	10
16	Critical Approaches to Creative Media Products	3	10
17	Designing Idents for Television	3	10
18	Digital Communication	3	10
19	Digital Graphics for Computer Games	3	10
20	Digital Graphics for Interactive Media	3	10
21	Digital Graphics for Print	3	10
22	Digital Video Production for Interactive Media	3	10
23	Drawing Concept Art for Computer Games	3	10

Unit number	Unit title	Unit level	Unit credit
24	DVD Menu Design and Authoring	3	10
25	Film Studies	3	10
26	Flash for Computer Games	3	10
27	Graphic Narrative Production	3	10
28	Interactive Media Design	3	10
29	Motion Graphics and Compositing Video	3	10
30	Music Video Production	3	10
31	Object-oriented Design for Computer Games	3	10
32	Photography and Photographic Practice	3	10
33	Pre-production Techniques for the Creative Media Industries	3	5
34	Radio Studies	3	10
35	Research Techniques for the Creative Media Industries	3	10
36	Sound for Computer Games	3	10
37	Sound in Interactive Media	3	10
38	Soundtrack Production for the Moving Image	3	10
39	Stop Motion Animation Production	3	10
40	Television and Video Studies	3	10
41	Understanding the Creative Media Sector	3	10
42	Web Animation for Interactive Media	3	10

Detailed information about individual units, including the credit value and unit level, can be found in the unit section of this specification.

What are the assessment requirements for this qualification?

To achieve a unit learners must:

- achieve **all** the specified learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each
- provide evidence that it is their own work and sufficient to demonstrate that they have the knowledge, skills and understanding for each assessment criteria within the unit
- cross reference evidence within and between units, where it is appropriate. This gives learners focus and helps with internal verification and standardisation processes. It will also help to ensure that learner feedback is specific to the assessment criteria.

Learners should be assessed when they can consistently meet the standard required in the assessment criterion.

Learners must be able to demonstrate that they have achieved each assessment criterion within a unit. There will be instances when the learner is able to use one piece of evidence to prove their achievement across different assessment criteria. There may also be evidence which is relevant across different units. It is therefore not necessary for the learner to have each assessment criterion assessed separately. Learners should be encouraged to reference the assessment criteria that the evidence relates to.

It is important that the evidence is:

Valid	relevant to the standards for which competence is claimed
Authentic	produced by the learner
Current	sufficiently recent to create confidence that the same skill, understanding or knowledge persist at the time of the claim
Reliable	indicates that the learner can consistently perform at this level
Sufficient	fully meets the requirements of the standards.

Types of evidence

To successfully achieve a unit the learner must gather evidence which shows that they have met the required standard in the assessment criteria.

Evidence can include the following:

- direct observation of the learner's performance by their assessor
- outcomes from oral or written questioning

- products of the learner's work
- personal statements, reflective accounts
- outcomes from simulation, where permitted by the assessment strategy
- professional discussion
- assignments, projects, case studies
- authentic statements, witness testimony
- expert witness testimony
- evidence of recognition of prior learning.

Evidence must be made available to the assessor, internal verifier and Edexcel standards verifier. A range of recording documents is available on the Edexcel website www.edexcel.com . Alternatively centres may develop their own.

What does a centre need to offer this qualification?

Centre recognition

Centres that have not previously offered Edexcel qualifications will need to apply for and be granted centre recognition as part of the process for approval to offer individual qualifications. New centres must complete both a centre recognition approval application and a qualification approval application.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by the new qualification and the conditions for automatic approval are met. Centres already holding Edexcel approval are able to gain qualification approval for a different level or different sector via Edexcel online.

Approvals agreement

All centres are required to enter into an approvals agreement which is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and any linked codes or regulations. Edexcel will act to protect the integrity of the awarding of qualifications if centres do not comply with the agreement. This could result in the suspension of certification or withdrawal of approval.

Quality assurance

Detailed information on Edexcel's quality assurance processes is available in *Annexe B*.

What resources are required to deliver this qualification?

This qualification is designed to support learners working in the Creative and Media sector or preparing for work. Physical resources need to support the delivery of the programme and the assessment of the learning outcomes and must be of industry standard. Centres must meet any specific resource requirements outlined in *Annexe E: Assessment requirements*. Staff assessing the learner must meet the requirements within the overarching assessment strategy for the sector.

Programme design and delivery

Mode of delivery

Centres are free to offer this qualification using any mode of delivery (such as work based, part-time, evening only, distance learning, full-time) that meets their learners' needs. Whichever mode of delivery is used, centres must ensure that learners have appropriate access to the resources identified in the specification and to the subject specialists delivering the units. This is particularly important for learners studying for the qualification through open or distance learning.

The use of assessment evidence drawn from learners' work environments should be encouraged. Those planning the programme should aim to enhance the vocational nature of the qualification by:

- liaising with employers to ensure a course is relevant to learners' specific needs
- accessing and using non-confidential data and documents from learners' workplaces
- linking with company-based and workplace training programmes
- making full use of the variety of experience of work and life that learners bring to the programme.

A wide range of delivery methods can be used to meet the needs of learners. This may include inviting employers to share their experiences of the sector with the learners. Alternatively learners could arrange to visit different work environments to observe workers in situ and compare practice. The use of videos, CD Roms or snap shots from popular television programmes can be used to give learners an insight into the work place and stimulate discussion.

Individual tasks and group work can both be valuable tools for learners to gain a knowledge and understanding of the sector whilst gaining time management, organisational and team building skills.

Practical work is one of the most effective delivery methods for learners of all abilities. Role play and realistic scenario based tasks can also be used to support learners through the learning process.

Personal, learning and thinking skills (PLTS)

Learners working towards an apprenticeship are required to demonstrate personal, learning and thinking skills. The PLTS framework comprises six groups of skills:

- independent enquiry
- creative thinking
- reflective learning
- team working
- self-management
- effective participation.

The achievement of PLTS is based on evidence that is subject to quality assurance. The development of a learner's personal learning and thinking skills may be recorded on the form given in *Annexe C*. Alternatively centres may use their own recording documentation.

Functional skills and Essential Skills Wales

Functional skills have been developed to provide young people and adults with the core transferable skills they need to help them adapt and learn thorough their working life and in a changing economy. Functional Skills replace key skills in all apprenticeship frameworks from September 2010. From September 2010 Level 2 apprenticeship frameworks require the apprentice to gain Functional Skills qualifications in mathematics and English at a minimum of level 1.

If learners have already achieved Level 1 Functional Skills English and/or Level 1 Functional Skills Mathematics the employer may allow the learner to study for a Functional Skills qualification at Level 2 as part of the Apprenticeship framework.

Edexcel are accredited to offer Essential Skills Wales Entry to Level 4 qualifications. The Essential Skills Wales suite of qualifications will replace the key skills and Basic Skills qualifications for learners in Wales. The suite is divided into the following subject areas:

- Communication
- Application of Number
- Information & Communication Technology (ICT).

Unit content

The unit content specifies the skills, knowledge and understanding required for the achievement of the unit.

Each learning outcome is stated in full and then the key phrases or concepts related to that learning outcome are listed in italics followed by the subsequent range of related topics.

Learners assessed through external tests may be assessed on any aspect of the content. Where internal assessment is used learners must be able to demonstrate that they have achieved the standard required for each learning outcome.

The learner should have the opportunity to cover all of the unit content to ensure that learners are able to meet the standard determined in the assessment criteria.

Understanding the format of the content

- | | |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Learning outcomes | <ul style="list-style-type: none">• these are shown in bold at the beginning of each section of content |
| Italicised sub-headings | <ul style="list-style-type: none">• these are key phrases or concepts that must be covered in the delivery of the unit. Colons mark the end of an italicised sub-heading |
| Elements of content | <ul style="list-style-type: none">• the elements are in plain text and amplify the sub-heading. The elements must be covered in the delivery of the unit. Semi-colons mark the end of an element |
| Brackets | <ul style="list-style-type: none">• contain amplification of content which must be covered in the delivery of the unit |
| 'eg' | <ul style="list-style-type: none">• is a list of examples that could be covered or could be replaced by other, similar material. |
| Essential guidance for tutors | |
| Assessment | <ul style="list-style-type: none">• gives amplification about the nature and type of evidence that learners need to produce in order to achieve the unit. This section should be read in conjunction with the assessment criteria. |
| Essential resources | <ul style="list-style-type: none">• identifies any specialist resources needed to allow learners to generate the evidence required for each unit. The centre will be asked to ensure that any requirements are in place when it seeks approval from Edexcel to offer the qualification. |
| Indicative resource materials | <ul style="list-style-type: none">• gives a list of suggested tutor resource materials. |

Units

Unit 1: 2D Digital Art for Computer Games

Unit code: F/600/6538

QCF level: 2

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to the production and development of 2D digital graphics and textures for use in computer games. Learners will investigate the theory underlying the creation of digital graphics and develop their awareness of how graphic styles are used to set mood and theme in computer games. Learners will develop their pencil drawing skills and investigate a range of mark-making techniques. Learners will become familiar with the basic tools of digital graphics software used to produce 2D images and textures for games from their pencil drawn concept art and reflect critically on their own work.

Unit introduction

Anyone considering a career in the games industry needs to be aware of the various disciplines and skills relevant to the industry but which may be outside their own particular interest or career goals. With graphics continuing to be the basis on which games are sold, those who aspire to be graphic artists in the games industry must gain basic practical experience in the production and development of digital graphics for use in games. There is a need for them to understand how to use digital image manipulation tools and save images in appropriate file formats.

At this level a basic awareness and experience of industry-standard software is required. All entrants to the industry also need to understand how to plan to make the most effective use of resources and make the most effective use of their time.

This unit provides learners with knowledge, understanding and practical experience. It allows learners to gain experience in the production and development of 2D digital graphics and textures for use in computer games. It is important for learners at this level to develop appropriate skills in manipulating digital graphics software. They will investigate graphic styles used to set mood and theme in games. It is also important that learners develop their pencil drawing skills and investigate a range of mark-making techniques. In this unit, learners will become familiar with the basic tools of digital graphics software used to produce 2D digital images and textures for computer games from concept art.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Know about digital graphics technology	1.1	outline the key characteristics of digital graphics technology
2	Know about the graphic styles and graphical themes used in games	2.1	outline graphic styles and graphical themes used in games
3	Be able to use pencil to draw concept art for a game	3.1	apply appropriate pencil drawing techniques to create concept art for a game, partially realising intentions
4	Be able to use digital tools to create a 2D digital image and texture for a game from a concept drawing.	4.1	apply appropriate digital graphics tools to create a 2D digital image and texture for a game from a concept drawing, partially realising intentions.

Unit content

1 Know about digital graphics technology

Pixel: picture element; image resolution

Types of digital graphics: raster images (bmp, gif, tiff, jpg); vector images (psd, wmf, fla, ai)

File extensions: eg bmp, png, gif, tiff, jpg, psd

Compression: lossy; lossless

Image capture: scanner; digital camera

Optimising: target image output; image bit depth; image resolution; image dimensions; compression

Output: intended image output, eg print, screen, worldwide web; compression

Storage of image assets: file size, file-naming conventions, asset management

2 Know about the graphic styles and graphical themes used in games

Graphic styles: colour, eg colour theory, colour perception, effect of colour, point of focus; style, eg cartoon, photo-realistic, cel-shaded; exaggeration, eg anime

Graphical themes: eg action, adventure, sports, fantasy, simulation

3 Be able to use pencil to draw concept art for a game

Stimulus: eg client brief, own brief

Ideas: brainstorming; mood boards; thumbnail sketching

Pencil drawing techniques: perspective (one point, two point, three point, view point); scale; proportion; mark making, eg shading, shadow, tonal value, lineweight

Concept art: pencil drawings (character, weapon, vehicle, environment)

4 Be able to use digital tools to create a 2D digital image and a texture for a game from a concept drawing

File types: raster, eg bmp, gif, tiff, jpg; vector, eg psd, wmf, fla, ai

Digital tools: size and resolution; colour, eg palette, brightness, contrast; layers; cropping; selecting, eg marquee, lasso, magic wand; copy; paste; undo; save; effects; history; shape; brushes

2D digital image and texture creation: from concept art, eg character, weapon, vehicle, environment; textures to skin 3D objects, eg concrete, stone, wood, ground, brick, fabric, sky, metal

Review finished image: compared with original intentions; technical qualities; aesthetic qualities

Delivery

This unit encourages learners to develop practical skills in producing a digital image for a purpose saved in the most appropriate file format.

Much of the study of digital graphics technology can be delivered through tutorial sessions reinforced with small practical projects to develop practical knowledge of the theory aspects of digital graphics. Learners should be given the opportunity to investigate raster-based and vector-based graphic images and associated technologies.

Study of graphical styles gives an understanding of the various means to represent a character for a game. Learners could study graphics styles by observing and comparing graphical themes common in a range of interactive game genres. Some initial learning may take place through class teaching and discussion, which can then be reinforced by structured gameplay with each game experience contributing to a body of understanding of commonly-used graphical styles. In preparation for working in the sector, learners should appreciate the importance of concept art.

Learners should be encouraged to develop and maintain their freehand pencil drawing skills to enable them to plan and communicate their ideas effectively and efficiently. It is important that learners plan their work carefully before commencing the production phase of any project. To enhance pencil drawing skills learners should produce concept artwork for a range of purposes as outlined in the unit content (for example, creating concept art for characters, weapons, vehicles and environments for a game).

The study of digital graphics tools can be delivered through hands-on workshops and tutorial sessions using digital graphics software. Understanding and use of software should be undertaken in short, carefully structured stages, each stage being reinforced with small, practical projects which, when completed, allow progress to other stages. Tutors might find it valuable to use short build-up activities leading ultimately to a finished digital image.

Learners should produce digital artwork for a range of purposes from their own concept drawings. For example, learners could produce digitally created images for game characters, weapons, vehicles and environments.

Learners should be encouraged to continually judge their practical work, recording their strengths and weaknesses regularly, for example in a learning diary. Review of these reflections will encourage learners to look rigorously and productively at the ways in which they approach new tasks and this skill is an attractive professional attribute.

Whilst this is mainly a practical unit there is much work that can be done researching into secondary sources through libraries, websites, periodicals etc. The involvement of professional game development personnel through visits and talks can bring much of the unit content alive.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and structure of the programme.
<p>Introduction to digital graphics techniques.</p> <p>Lectures on, demonstrations of and discussions about:</p> <ul style="list-style-type: none"> • pixels and image resolution and their relationship • raster and vector images and their associated file extensions • graphic file extensions and their relationship to file compression • capturing an image using a scanner and a digital camera • how to optimise an image for an indented image output • the importance of using asset management techniques to store image assets.
<p>Assignment 1 – What is Digital Graphics Technology?</p> <p>Exercise on the technology behind digitally generated images and associated compression and optimisation techniques that can be employed for a particular image output.</p> <p>Learners will:</p> <ul style="list-style-type: none"> • investigate picture element and image resolution • investigate types of digital graphics used to create digital images • investigate file extensions used in digital graphics, file compression and optimisation • investigate image capture, image output and storage of image assets • generate log or report during investigations of relevant digital graphics technologies used to create 2D digital art for computer games.
<p>Introduction to digital graphics styles used in games.</p> <p>Lectures on, demonstrations of and discussions about:</p> <ul style="list-style-type: none"> • a range of graphical themes used in computer games • graphics styles that can be used in computer games.

Topics and suggested assignments and activities

Assignment 2 – Computer Games and their Graphic Styles.

Exercise on the graphical themes and styles used in computer games.

Learners will:

- investigate action, adventure, sports, fantasy and simulation graphical themes
- investigate colour theory, colour perception, effect of colour, point of focus, style and exaggeration used in games
- generate log or report during investigations of the graphical themes and styles used in computer games.

Introduction to drawing concept art for computer games.

Demonstrations of and discussions about:

- methods to assist creativity and the generation of ideas
- perspective views
- scale and proportion
- mark making
- techniques to assist with the creation of computer game concept art of characters, weapons, vehicles and environments.

Assignment 3 – Computer Game Concept Art.

Exercise on the creation of computer game concept artwork of characters, weapons, vehicles and environments using pencil drawing techniques.

Learners will generate computer game concept artwork for characters, weapons, vehicles and environments using pencil drawing techniques.

Introduction to drawing digital images from concept drawings using digital graphics software and hardware.

Demonstrations of and discussions about:

- file types
- digital imaging tools
- digital image creation from concept art
- the importance of reviewing finished production work.

Assignment 4 – Game Art, Digital Image Creation.

Exercise on the creation of a digital image for a computer game from a concept drawing.

Learners will:

- generate digital computer game artwork from concept artwork produced in assignment 3
- generate log or report reviewing the finished digital image, comparing it with original intentions and assessing its technical and aesthetic qualities.

Assessment

Evidence for assessment

Evidence for achievement of learning outcomes 1 and 2 can be presented in any appropriate format – written reports, class presentations, structured audio-visual statements etc. For some learners a viva voce type assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas and oral presentations should be recorded for the purposes of internal and external verification.

Evidence for achievement of learning outcomes 3 and 4 will be the concept artwork pencil drawings and the digital image for a game produced from one of those drawings.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will give outline descriptions of the key characteristics of digital graphics technology, making some reference to each italicised sub-heading of the content for the learning outcome. All aspects of the descriptions provided will be accurate and relevant. If there are any illustrative examples they will not be well chosen or fully appropriate. For example, a learner might note, 'A digital image is made up with lots of tiny different coloured dots on the screen. These dots are called pixels.'

2.1: learners will give outline but accurate and relevant descriptions of the graphics styles and graphical themes used in games. Any illustrative examples offered will not be well chosen or fully appropriate. For example, the learner might comment, 'A cel-shaded image is a type of computer graphic which is designed to make the image appear to be hand drawn.'

3.1: learners will generate ideas and from those ideas draw concept art using pencil drawing techniques as set out in the unit content. They must create character, weapon, vehicle and environment concept artwork for a computer game as outlined in the unit content. Learners will be hampered in expressing their intentions fully by their limited grasp of techniques and skills, so that their final product will only partially match what they had in mind when they envisaged the product.

4.1: learners will apply appropriate digital graphics tools, as outlined in the unit content, to produce a finished digital image for a computer game from their own concept drawings. Learners will have achieved a finished image working with basic digital graphics software tools and techniques, but the

outcomes will not be particularly successful. The work on the image will have been purposeful and the outcome will have some shape, some sense of design. They will describe the digital graphics tools they used to produce the digital representation of their concept artwork and document it in some way such as in a blog, report or diary. When reviewing their finished image, learners will provide an unelaborated comparison of the finished piece with their original intentions. Assessments of its quality will be relevant but very generalised and at the level of assertion. A learner might note, for example, 'The final image was good and I thought the way I used the anime style worked well.'

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – What is Digital Graphics Technology?	Contribution to digital graphics e-zine on digital graphics technology.	Finished article as electronic file.
2.1	Assignment 2 – Computer Games and their Graphic Styles	Contribution to student game developer conference on graphics styles used in games.	Report document as word-processed or electronic presentation.
3.1	Assignment 3 – Computer Game Concept Art	Brief from a producer to create concept artwork for a new game for young children.	Development log containing: all ideas notes, brainstorming, mood boards, thumbnail sketching pencil drawings of character, weapon, vehicle and environment concept artwork.

Criteria covered	Assignment title	Scenario	Assessment method
4.1	Assignment 4 – Game Art, Digital Image Creation	Brief from a producer to create a digital representation of one of the concept drawings for the new game.	Project portfolio containing: all stages in the creation of the digital image personal review comments on the finished digital image.

Essential resources

Centres should develop their own library of up-to-date resources to include print and digital image concept art (from game websites or professional journals, for example). Because of the practical nature of this subject learners need access to the appropriate computer hardware and digital graphics software.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe Photoshop CS3 Classroom in a Book* (Adobe, 2007) 978-0321492029

Adobe Creative Team — *Adobe Photoshop CS4 Classroom in a Book* (Adobe, 2008) 978-0321573797

Adobe Creative Team — *Adobe Photoshop Elements 7.0 Classroom in a Book* (Adobe, 2008) 978-0321573902

Baylis P and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Student Book (Edexcel, 2010) 978-1846906732

Baylis P, Freedman A and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Teaching Resource Pack (Edexcel, 2010) 978-1846907364

Baylis P, Holmes P and Starkey G — *BTEC First Media* (Heinemann, 2007) 978-0435464707

Chiang D — *Mechanika: How to Create Science Fiction Art* (IMPACT, 2008) 978-1600610233

Hall K and Holmes P — *BTEC First in Media: A Practical Handbook* (Edexcel, 2007) 978-1846901980

Hartas L — *The Art of Game Characters* (ILEX, 2005) 978-1904705338

Jenisch J — *The Art of the Video Game* (Quirk Books, 2008) 978-1594742774

Morris D and Hartas L — *The Art of Game Worlds* (ILEX, 2004)
978-1904705345

Page N, Robertson S, Belker H and Goerner M — *Concept Design 2* (Titan Books Ltd, 2006) 978-1845762858

Journals

Develop — source of news for the game development and design industry

Edge — video game culture

MCV — source of trade news for the gaming and interactive entertainment industry

Websites

conceptartworld.com/ — a concept art directory and blog, featuring concept artists and news.

swg.warcry.com/images/gallery/37?page=1 — Star Wars concept art gallery

www.conceptarthouse.com/ — Concept Art House is a leading art service provider and original IP studio.

www.eidos.co.uk/games/info.html?gmid=147 — a UK publisher's site, examples of game graphics

www.gamasutra.com — game developers' website (free registration required, a major resource)

www.gamedev.net/ — resources for game developers

www.gamedevelopers.ie — the Irish game developers' site

www.guildwars.com/products/guildwars/gallery/concept/default.php — Guild Wars concept art gallery

www.igda.org — independent, non-profit organisation for international game software developers

www.tiga.org — the independent game developers' association site

Unit 2: Media Audiences and Products

Unit code: M/600/6471

QCF level: 2

Credit value: 5

Guided learning hours: 30

Unit aim

The aim of this unit is to encourage learners to think about the construction of media products. Learners will develop their understanding of how the media industries think about their audiences, how these industries create products for specific audiences and how they themselves, as members of an audience, understand media products.

Unit introduction

An understanding of how the media targets audiences with specific products is vital to working effectively in the creative media sector. It follows, therefore, that learners should be able to identify the methods used by media industries to target specific audiences. It is also important that learners should be able to think critically about how audiences understand and make sense of media products.

This unit focuses on the ways in which media industries gather information about their audiences and categorise them, how the texts that industries produce are constructed and addressed to particular audiences, and how those audiences make sense of the products offered to them.

In this unit learners will also become familiar with the basic language and key concepts which are fundamental to studying the media and its products.

Learners can approach this unit with reference to one specific industry in the media sector and ideally the one in which their production work will take place.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know how a media industry identifies audiences for its products	1.1 outline ways in which a media industry identifies audiences for its products
2 Understand how media products are constructed for specific audiences	2.1 outline ways in which a media product is constructed for a specific audience
3 Understand how audiences can respond to media products.	3.1 outline ways in which a media product might be understood by an audience.

Unit content

1 Know how a media industry identifies audiences for its products

Classification of audiences: eg Standard Occupational Classification (ABC1 etc), lifestyle

or psychographics; postcode or geodemographics; age; gender; sexual orientation

Audience research: eg focus groups, questionnaires, ratings (BARB), audience measurement panels, face-to-face interviews

2 Understand how media products are constructed for specific audiences

Elements of construction: selection; composition; combination

Modes of address: eg through content, through language, through genre, through narrative, through visual imagery, through graphic style

According to genre: eg sci-fi movie, horror movie, romantic comedy, television soap opera, television situation comedy, television documentary, 'reality' TV, tabloid newspaper,

broadsheet newspaper, local newspaper, national newspaper, freesheet, lifestyle magazine, specialist magazine, comic, radio drama, radio documentary, music programming, radio comedy, news website, fan culture website

Constraints: codes of practice, eg BBC guidelines, web accessibility guidelines (W3C), press codes of conduct, advertising standards; legal restrictions, eg privacy, libel law, defamation, race discrimination law, data protection, freedom of information, copyright

3 Understand how audiences can respond to media products

Reasons for preference: eg age, gender, ethnic background, sexual orientation

Language codes: eg verbal, visual, aural

Generic codes: eg language, content, narrative, characters, style, camera work, soundtrack, music, mise-en-scène, iconography, graphics

Delivery

The purpose of this unit is to lead learners to think about the construction of media products and, vitally, to apply this thinking to their own production work. Whether they are led to do this by thinking first about the audiences for which the products are created, or about the construction of the products themselves, learners' studies can be related directly to their own production work, moving from their own work towards professional and commercial work.

Learners could therefore start by thinking about the possible audiences they had in mind when planning one of their own productions and the ways in which that might have affected the way they worked or the final product. They should be introduced to the methods employed for categorising audiences that are relevant to the media industry that they are studying.

Learners should also be introduced to the ways in which this industry researches audiences – how it establishes the make-up of its audience and the type of audience it is. Learners could then use these methods to determine the audience for the texts they have created and do some appropriate exercise to establish an audience response to one of their own products. This last exercise could be combined with research for the evaluation of one of the products they have created in a production or technical unit, such as Unit 5: Video Production or Unit 6: Audio Production. Whilst the content of learning outcome 1 is important, it should not take as long to cover as the content of the other two learning outcomes, so it is suggested that, in terms of apportioning the teaching, audience categories and research should be given less time than the other two outcomes. Learners should be introduced to the basic elements of construction such as selection, composition, and combination, how the choices made here are determined by the audience aimed at, and how these choices might – or might not – determine readings. Again, this could be approached through observations on their own work, as well as through looking at carefully chosen examples taken from professional practice. Looking at what is chosen and how it is combined could, through recognising patterns in selection and combination, lead into a study of codes and conventions. This should be done through a specific genre in a specific medium perhaps relevant to the learners' own production activity. Reference back to the learners' own production activity will possibly make this genre analysis work more engaging and should, vitally, inform that production activity. Since this is mainly a knowledge and theory unit much research can be done through the internet. Useful sites can be found by using relevant keywords, such as 'media ... media audiences ... genre ... film studies ... westerns' etc.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to the unit and structure of assessment.
Introduction to audience categorisation: <ul style="list-style-type: none">• Standard Occupational Classification (ABC1 etc)• lifestyle (psychographics)• postcode (geodemographics)• age, gender and sexual orientation• independent reading of prepared handouts.
Introduction to audience research: <ul style="list-style-type: none">• introduction to audience research methods• independent reading of prepared handouts.
Personal profile: <ul style="list-style-type: none">• working in pairs, learners analyse own media consumption habits through questionnaire• using results each learner identifies and individually writes up own profile.
Assignment 1 – Identifying Audiences. Learners construct a proposal to research audience responses to a media product. Learners will: <ul style="list-style-type: none">• identify methods of research to be used• prepare questionnaires, lead questions for focus groups or panels• state how each method will help to identify audience classification• exchange and comment on each other’s proposals. Learners then individually produce a research report identifying the audience for the product.
Understanding how media products are constructed for audiences: <ul style="list-style-type: none">• elements of construction• modes of address• construction of products according to genre• influence of constraints• independent reading of prepared handouts.

Topics and suggested assignments and activities

Assignment 2 – Media Products for Media Audiences.

Learners will work in pairs on a given media product, discussing and identifying:

- genre of product
- methods of construction
- style or mode of address
- constraints on the production.

Learners then individually produce a report showing how these elements relate to the way the product has been constructed.

Understanding how audiences make sense of media products:

- generic elements
- narrative
- language and mode of address
- independent reading of prepared handouts.

Assignment 3 – Understanding a Media Product.

Group activity analysing a specific product looking at:

- languages employed
- generic codes employed
- reasons for liking it.

Learners then write, individually, a review of the product for a fanzine or website.

Assessment

Evidence for assessment

Evidence for achievement of the learning outcomes of this unit can be presented in any format which enables the learner to demonstrate knowledge and understanding of the unit's content. Separate assignments can be set to cover each of the grading criteria, or one assignment can be set which will enable learners to produce evidence for all three criteria. However, it should be noted that an assignment covering the whole unit could be overwhelming for this level of learner.

Appropriate formats would include written reports, class presentations, structured audio-visual statements, and audio or audio-visual programmes. For some learners a viva voce type assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas and oral presentations should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will provide a correct but unelaborated outline of ways in which a media industry identifies audiences for its products. For the content relating to learning outcome 1 this will vary according to the media industry selected. So, a learner will, with reference to the press, give the content of a readership profile for a newspaper in very general outline, and then give a simple account of how sales and readership figures might be compiled. For the film industry it will be noted that audience classification is usually based around age, gender, and the different sorts of audiences associated with the different types of films.

1.2: treatment of the ways in which a media product is constructed for a specific audience will be characterised by accurate but unelaborated description of a text, its category, construction, and mode of address. A learner might note, for example: 'The Sun is a tabloid newspaper. It has more pictures than writing. Sentences are short and the writing is broken up by a lot of sub-headings. It uses a very small number of everyday words.' Consideration of the ways in which legal and other constraints have affected the construction will be limited to comments such as, 'Films made for audiences under 16 will not contain any graphic violence or sex scenes.'

1.3: analysis of a text to show how it might be understood will cover the required ground as specified in the unit content but at the level of simple description. For instance, a learner might note: 'This soap opera is set in a small town in Australia. It is aimed at a younger audience. The characters are the same every week but now and then someone leaves and someone new comes in. The plots are all about people's relationships. The dialogue is simple but not very realistic. Most of the sets are the insides of people's homes. It is mostly shot in close-up and shot-reverse-shot.'

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Identifying Audiences	Using a given media product, learners produce a proposal for media research methods to identify the audience for the product. If this unit is done in the latter part of the programme, learners might research one of their own products.	<ul style="list-style-type: none"> • Preparatory notes on method. • Questionnaires. • Raw data. • Research report.
2.1	Assignment 2 – Media Products for Media Audiences	Report for a media company on a rival product.	<ul style="list-style-type: none"> • Discussion notes. • Report.
3.1	Assignment 3 – Understanding a Media Product	Article for a fanzine or website on a chosen media product.	<ul style="list-style-type: none"> • Discussion notes. • Article.

Essential resources

Centres are recommended to obtain textbooks which cover the content of this unit in an appropriate way for Level 2 learners. They should also develop their own library of suitable media products for learners to study, including print material, computer games, radio and television programmes and films recorded 'off air' (or DVD versions with bonus materials) as appropriate to their programme. Centres must ensure that they have copyright clearances for copying and recording material.

Indicative resource materials

Textbooks

Abercrombie N and Longhurst B — *The Penguin Dictionary of Media Studies* (Penguin, 2007) 978-0141014272

Baylis P and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Student Book (Edexcel, 2010) 978-1846906732

Baylis P, Freedman A and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Teaching Resource Pack (Edexcel, 2010) 978-1846907364

Baylis P, Holmes P and Starkey G — *BTEC First Media* (Heinemann, 2007) 978-0435464707

Baylis P, Holmes P, Holmes S and Jewers S — *Level 2 Higher Diploma in Creative and Media*, Student Book (Heinemann, 2008) 978-0435499280

Hall K and Holmes P — *BTEC First in Media: A Practical Handbook* (Edexcel, 2007) 978-1846901980

Wall P — *Media Studies for GCSE* (Collins Educational, 2007) 978-0007234974

Journal

New Media Age

Websites

www.asa.org.uk — the Advertising Standards Authority

www.barb.co.uk — the Broadcasters' Audience Research Board

www.bbfc.co.uk — the British Board of Film Classification

www.englishandmedia.co.uk/mediamag.html — the English and Media Centre

www.imdb.com — a movie database

www.mediaknowall.com — a web guide for media students

www.mediawatchuk.org — Mediawatch

www.ofcom.org.uk — the regulator of the UK's broadcasting, telecommunications and wireless communications industries

www.rajar.co.uk — the radio audience research organisation

www.vlv.org.uk — the Voice of the Listener and Viewer

Unit 3: Photography Techniques

Unit code: K/600/6517

QCF level: 2

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to develop learners' skills in photography. The unit covers generating ideas for photographic images, producing images and producing final prints. Learners will also explore past and current photographic practice, including techniques and styles, in order to inform their own photographic work.

Unit introduction

Photography – which is included in the photo-imaging sector – has a wide range of applications within the creative media sector including photo-journalism, advertising, fashion photography, food photography and stills photography for film and television. It also exists outside what would be strictly defined as the creative media sector in professions such as the high-street photographer (who might cover weddings and take family portraits), medical, industrial and architectural photographers.

This unit will enable learners to explore and develop their understanding of the techniques, equipment and materials used in the production of photographs. Learners will investigate both film-based photographic methods and the processes involved in digital photography. They will look at historical and contemporary practice and will develop ideas for their own photographic work and create a range of photographic images.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to generate ideas for photographic images informed by photographic practice	1.1 present an idea for photographic images which shows some relationship to photographic practice
2 Be able to use photographic technology to create photographic images	2.1 use photographic technology to create photographs that partially realise intentions
3 Be able to review own photography work.	3.1 review strengths and weaknesses of own photographic work.

Unit content

1 Be able to generate ideas for photographic images informed by photographic practice

Idea generation: creative thinking, eg brainstorming, group discussion, development exercises; recording ideas, eg notes, sketches, collages, trial shots; limitations, eg resources, time, costs

Photographic practice: past practice; contemporary practice; forms, eg press, documentary, portraiture, advertising, fashion, studio, location, gallery; techniques, eg available lighting, artificial lighting, posed, snapshot, differential focus, manipulation of grain, manipulation of tonal range, manipulation of colour, masking, collage; styles, eg reportage, painterly, punk, surrealist, experimental

2 Be able to use photographic technology to create photographic images

Photographic equipment: camera; tripod; artificial lights, eg flash, floods, spots, diffusers

Photographic technology: film-based (film camera, aperture and shutter speed, film stock, printing paper, equipment for film processing and printing, chemicals for processing and printing); digital (digital camera, camera functions, memory chips, computer, image manipulation software, scanner, printers, printing paper)

Planning: eg shooting schedule, studio booking, equipment booking, locations, models

Image quality: technical, eg sharpness, depth of field, control of blur, exposure, contrast, colour saturation, light effects; aesthetic, eg composition; point of view, impact

Presentation of final prints: mounting and finishing materials; exhibition mounting; portfolio mounting; titling

Health and safety: eg using electrical equipment, handling chemicals, darkroom protocols, working on computer screens

3 Be able to review own photography work

Finished product: realisation of intentions; technical qualities; aesthetic qualities

Production process: technical competencies; creative ability; time management

Sources of information: self-evaluation; documentation, eg ideas notes, sketches, trial shots, notes on professional photographers; comments from others, eg audience, peers, tutors, client

Delivery

This unit requires a structured approach to the development of skills and the exploration of photographic and digital techniques for the production of photographs. Learners should look at both digital and film-based photographic techniques, technology and materials even though they need use only one of them (though there is no reason why they should not use both if facilities permit that).

It is essential that learners are aware of the historical and contemporary work of professional photographers and that they develop an understanding of the skills and techniques associated with traditional (film-based) methods and digital processes. Film-based methods would give learners experience of studio and darkroom practices for the production of black and white photographs. Digital photography would give learners an opportunity to create images using digital technology and manipulate these images using computer software.

Learners should be introduced to the range of photographic types and styles from the beginning of photography (Daguerre and Fox Talbot) to contemporary photography (Martin Parr, Richard Avedon, Henri Cartier-Bresson) and the range of digital photographic artists that can be found on websites such as www.lensculture.com.

Learners should be introduced to a range of photographic forms that they might encounter every day such as press, advertising, fashion, portraiture, documentary and experimental. They are likely to be passive consumers of photography and need to become active and critical thinkers. The ideas they generate will be informed by their investigations into types and styles of photography. However, their ideas might also be informed by their use of a particular technology.

When they are introduced to the camera and its controls, learners should be shown a range of cameras. The development of digital technology means that cameras for both film-based and digital photography can have identical bodies and lenses. Learners need to be aware of the similarities and differences, and the advantages and disadvantages of film-based and digital cameras. Where possible, learners should have easy access to a range of both types of camera so that they can experiment with ideas in film-based and digital photography.

Initial exercises should show learners how to use the shutter and aperture to give them control of the camera. Automatic functions should, of course, be switched off at this stage. Simple exercises in composition can also be set, such as looking for shapes and structures or mirror images. When film processing and printing is undertaken this should be kept simple at this stage – there is no need to teach learners about push-processing or dodging and burning techniques. That said, learners who show aptitude and a desire to learn such things should not be held back.

The same rule should be applied to digital techniques. What is formally taught need not go much beyond such techniques as saving files, erasing, cropping, layering, and use of the colour palette.

As they move towards their own production work, learners should be encouraged to approach photography as a means of visual expression and communication as well as a technical tool. As such they should have access to a wide range of imagery from the past and the present, produced on both film-based and digital equipment. They should be encouraged to experiment with photographic techniques and technology.

Learners should be encouraged to exhibit their work using appropriate display techniques. This could lead to a critique session where the learners comment on each other's work or an invited audience could review their work.

Learners would then be able to review their own work in light of comments from their peers or the audience and present their review in an appropriate way.

NB: Care over health and safety is vital when working in a photographic studio, darkroom, on location or using computer screens. Learners must thoroughly understand the health and safety issues associated with the use of photographic chemicals and equipment.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities

Introduction to unit.

Group discussion on types and styles of photography.

Assignment 1 – Ideas.

Task 1 – analysis of photographs from different periods of time.

Working in pairs learners will:

- research photographs from Daguerreotypes to digital images
- analyse photographic techniques and technology that use both traditional and digital technology
- prepare presentation
- undertake presentation and review other learners' presentations.

Task 2 – experimenting with the technology of photography.

Following an introduction to the technologies of photography, learners will:

- work in pairs to experiment with the technology of photography, eg pinhole cameras, photograms, scanning and manipulation
- individually prepare an illustrated report.

Task 3 – exercise to experiment with photographic techniques.

Following an introduction to photographic techniques learners will work individually to:

- identify and experiment with a number of photographic techniques, eg panning, panorama, macro, wide angle, fisheye
- produce some sample photographic images
- prepare presentation of their images
- undertake presentation and review other learners' presentations.

Task 4 – developing ideas for photographs for an exhibition

Working individually learners will:

- research the content for a photographic exhibition
- research size of photographs required for exhibition
- generate ideas for own contribution to the exhibition
- prepare and pitch ideas.

Topics and suggested assignments and activities

Assignment 2 – Photography Production.

Learners will:

- undertake pre-production planning for producing photographs
- undertake production of photographs
- undertake post-production including cropping and sizing of photographs.

Introduction to techniques of displaying photographs (one session).

Learners will:

- mount photographic work in an exhibition format
- set up exhibition.

Assignment 3 – Debrief.

Critique session providing an opportunity for learners to discuss each other's work and identify the strengths and weaknesses of their own work.

Learners will then complete the review process by presenting a report which identifies the strengths and weaknesses of their photography work, using an appropriate presentation format.

Assessment

Evidence for assessment

Assessment focuses on the ability to generate and research creative ideas for the production of photographs, the development and application of skills and techniques, the presentation of photographic images, and the ability to reflect critically on one's own work.

For learning outcome 1 learners will produce ideas for photographs informed by their investigation of past and current photographic practice. This could be evidenced through notes and sketches produced when developing their ideas annotated with comments on their investigation of historical and contemporary photographic practice. Learners could also produce an illustrated report or presentation. Presentations must be recorded for internal and external verification purposes. Tutor observation and one-to-one discussions can also provide evidence for criterion 1.1.

Evidence for achievement of learning outcome 2 will be the images developed from their investigations in learning outcome 1. Learners may use film-based or digital technology, or both. The final images must be mounted. Learners could hold an exhibition of their photographic work and ask their peers or an audience to comment on it. This will provide evidence for the review of their photography work.

Evidence for achievement of learning outcome 3 should be a critical self-assessment of finished work in the form of a written report or an oral presentation. Presentations must be recorded for internal and external verification purposes.

For some learners a viva voce type assessment might be appropriate for learning outcomes 1 and 3, either to provide all the relevant evidence or to provide additional evidence. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit, learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will generate ideas for the production of photographic images, and present those ideas to others either orally or in writing and sketches. Notes will be brief and uninformative and any sketches will be rough. Ideas for photographs will be arrived at quickly and will be fairly obvious though

there will be some evidence of the influences of current or past practice on their own ideas. There will be little indication of limitations in terms of resources, time and cost.

2.1: learners will use photographic techniques and technology, though they will not yet use them to good effect. They must be able to use film-based or digital cameras to take pictures using natural or artificial light. When using film-based technology they will be able to develop negatives and print from them. When using digital technology they will be able to download images from a digital camera to a computer, store them, employ simple manipulation techniques on them, and print them. Learners will be hampered in expressing their intentions fully by their limited grasp of technology and skills, so that their final product will only partially match what they had in mind when they envisaged the images. For example, the images will lack technical and aesthetic qualities such as a full tonal range, controlled focus, and balanced composition.

3.1: learners will provide an overall outline review of their own photography work. They will give an accurate outline of their objectives and be able to correctly identify faults but without using the appropriate terminology. For example, a learner might note: 'This is a picture of a football match showing a goal being scored but the picture is blurred and there is too much sky in it.' Learners will make limited use of the views of others on their photographic work.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Ideas	Learners have been commissioned by a local museum to produce photographs for an exhibition called 'My Town'.	<ul style="list-style-type: none"> • Collated research data. • Research log. • Examples of images found. • Presentation (recorded). • Folder of image experiments annotated by the learner. • A report on or audit of the skills developed.

Criteria covered	Assignment title	Scenario	Assessment method
			<ul style="list-style-type: none"> • Initial ideas reflecting their earlier investigations. • Development of ideas through mind mapping or other technique. • Final idea with a range of potential images identified.
2.1	Assignment 2 – Photography Production	As above.	<ul style="list-style-type: none"> • All pre-production documentation. • All production documentation. • All post-production documentation. • Finished photographs. • Exhibition.
3.1	Assignment 3 – Debrief	As above.	<ul style="list-style-type: none"> • Notes from critique. • Evaluation. • Review in form of, eg PowerPoint presentation with images. • Illustrated report.

Essential resources

The following types of traditional equipment would be appropriate at this level:

- basic cameras — 35mm compact, basic 35mm single lens reflex camera
- lighting equipment — tungsten halogen lamp units, electronic flash units, reflectors
- darkroom (darkroom workstations should be available on the basis of one per two learners).

The following digital equipment would be appropriate for this unit:

- computers and printers (computer work-stations should be available on the basis of one for each learner)
- software for the manipulation of digital images
- digital cameras
- flatbed scanners.

Indicative resource materials

Textbooks

Baylis P and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Student Book (Edexcel, 2010) 978-1846906732

Baylis P, Freedman A and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Teaching Resource Pack (Edexcel, 2010) 978-1846907364

Baylis P, Holmes P and Starkey G — *BTEC First Media* (Heinemann, 2007) 978-0435464707

Calder J and Garrett J — *The 35mm Photographer's Handbook* (Pan Books, 1999) 978-0330390132

Daly T — *The Digital Photography Handbook* (Amphoto Books, 2004) 978-0817437930

Focal Press Staff, Andrews P — *Adobe Photoshop Elements 7: A Visual Introduction to Digital Photography* (Focal Press, 2008) 978 0240521572

Hall K and Holmes P — *BTEC First in Media: A Practical Handbook* (Edexcel, 2007) 978-1846901980

Langford M — *101 Essential Tips on Photography* (Dorling Kindersley, 1997) 978-0756602246

Langford M — *Basic Photography* (Focal Press, 2000) 978-0240515922

Lessing P — *The First Week with My New Digital Camera: A Very Basic Guide to Understanding, Editing and Saving Digital Photographs* (Capital Books, 2002) 978-1931868174

MacCleod S — *Basics Photography: Post-Production Black and White* (AVA Publishing, 2007) 978-2940373055

Wignall J — *Kodak's Most Basic Book of 35mm Photography* (Kodak Books, 1996) 978-0879850463

Journals

Pixel Magazine – www.pixelmagazine.co.uk

Professional Photographer – www.professionalphotographer.co.uk

The British Journal of Photography – www.bjp-online.com

Websites

www.magnumphotos.com – Magnum Photos, a photo library cooperative

www.rps.org – The Royal Photographic Society

www.thebppa.com – The British Press Photographers' Association

Unit 4: Print Production

Unit code: J/600/6511

QCF level: 2

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to develop learners' understanding of print production techniques and technology. Learners will be introduced to ways of developing ideas for print products, and will investigate and practise hand, mechanical and digital print production methods.

Unit introduction

The printing industry is one of the United Kingdom's largest industries with an annual turnover in excess of £14 billion and over 17,000 printing companies serving a huge diversity of other industries. These are mainly small firms employing fewer than 20 people; there are only around 500 companies which have more than 50 in their workforce.

The products that printers deal with vary enormously – books, newspapers, magazines, fine art images, cartons and other forms of packaging, publicity material etc. Most of the work is done on highly sophisticated machines but there is still a place for the craft printer working with traditional technologies.

Through following this unit learners will develop their understanding of print production techniques and technology through investigating hand, mechanical and digital print production methods, learning about the advantages and disadvantages of each method. They will then make print products using analogue and digital print production technology and techniques.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know about print production technologies and techniques	1.1 outline print production technologies and techniques employed in the industry
2 Be able to develop ideas for printed material	2.1 present an idea for printed material which uses an appropriate technology
3 Be able to create print products	3.1 use print technology and techniques to create a print product that partially realises intentions
4 Be able to review own print production work.	4.1 review strengths and weaknesses of own print production work.

Unit content

1 Know about print production technologies and techniques

Techniques and technologies: hand, eg etching, linocut, screen print, woodcut, lithography; mechanical, eg letterpress, gravure, screen process; digital, eg photocopying, laser printing, inkjet, desktop publishing (DTP)

Advantages and disadvantages: skills and knowledge required; costs; speed; aesthetic considerations; technical considerations

2 Be able to develop ideas for printed material

Ideas generation: methods, eg brainstorming, group discussion, past and current commercial practice; technology, eg hand, mechanical, digital; requirements, eg client's needs, technical restrictions, costs, audience or market

Design originations: ideas sheets; thumbnails; concept drawings; rough drafts

Considerations: costs; available resources; quantity; legal and ethical issues

3 Be able to create print products

Production: technology, eg hand, mechanical, digital; proofs; final versions; production management

Products: eg newspapers, magazines, posters, leaflets, flyers, booklets, labels, packaging

4 Be able to review own print production work

Finished product: compared with original intentions; technical qualities; aesthetic qualities; suitability for audience or market

Production process: production management; technical skills; creative development

Sources of information: self-evaluation; production logs; comments from others, eg audience, peers, tutors, client

Delivery

This unit should be seen as an introduction to the processes, techniques and technology used in print production.

Learners should undertake research into the range of print processes and link this to the range of print products available. In the first lesson of the unit this could be done simply by getting the members of the group to do an 'audit' of all the printed material they have in their possession at that moment. This could be followed up with similar exercises with a more specific objective such as an audit of printed materials in the school or college reception foyer, in a specified shop, or on a tube or railway platform. One such exercise could focus on the proportion of verbal to visual information, another on the purpose of each item of printed material. In this way learners should begin to develop a thoughtful response to the print items that surround them.

Learners will need guidance on print production processes and should experiment with techniques from both hand-printing and mechanical processes. Learners should understand that print is about making multiples not just one-off items. Care should be taken to allow exploration of a full range of processes and techniques. Digital technology makes instantaneous prints possible but learners must understand the processes required to produce printed material in bulk.

Whilst centres may have DTP facilities it is recommended that these are used for initial design and layout of products. Learners should then be able to make the step towards production using both traditional and digital technology.

At this level learners may well be working as part of a team. In order to satisfy the learning outcome requirements centres should be aware of the need to provide an outline or theme for the print products. This may be a newspaper or magazine to which learners contribute specific sections, or posters and flyers for a specific event. There should be plenty of opportunities within any educational institution for learners to produce print products for real purposes and to tightly specified briefs.

Learners doing this unit will need access to a wide range of printed materials which may be found by research on the internet, through local or national contacts or through visits. It may be necessary to visit a local printer to develop an understanding of some traditional and digital print techniques and technologies.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to technologies and techniques used within the print industry (two sessions run by managers of local print companies).
Assignment 1 – Researching Print Techniques and Technology. Learners will: <ul style="list-style-type: none">• conduct research into current print technologies and techniques• collate research data• produce presentation• present findings to client.
Interaction with print production techniques and technologies – lectures on the following: <ul style="list-style-type: none">• outline of technologies available to learners• outline of techniques appropriate to those technologies• using print techniques and technology – practical use of equipment applying skills learned to different products. Learners follow up with pair work reviewing products made using these technologies and techniques.
Visit to nearby printing company.
Assignment 2 – Client Brief to Produce Materials to Support Product Information Campaign. Learners will: <ul style="list-style-type: none">• decide on type of product to be created to best fulfil brief• research into similar print products• generate ideas• prepare and give pitch to client (manager of local marketing company)• undertake content research for product• undertake pre-production work• undertake production• undertake post-production• gather responses to work• prepare evaluation presentation• give evaluation presentation.

Assessment

Evidence for assessment

Evidence for achievement of learning outcome 1 can be a report on the learner's investigations into print production techniques and technology. This could be backed up by examples of found print products annotated with relevant production process information. Oral presentations can also be used to provide evidence for this outcome. If used, they should be recorded for internal and external verification purposes.

Learners should identify suitable ideas through brainstorming, group discussions, rough sketches or layouts and then develop one of those ideas as evidence for achievement of learning outcome 2. Learners should show evidence of having considered the print run required, the budget available, the availability of resources and the time available to make the product. Oral presentations can also be used to provide evidence for this outcome. If used, they should be recorded for internal and external verification purposes.

Evidence for achievement of learning outcome 3 will be a product created using appropriate techniques and technology. The finished product should relate to the investigations undertaken and the ideas generated in learning outcome 2.

At this level it is understood that learners might work in a team. If so, tutors must ensure that learners provide individually produced evidence against which they can be assessed.

Reflection upon skill development, individual performance and teamwork is required as evidence for achievement of learning outcome 4. Learners should be aware of the need to consider their own and team performance as well as evaluating the finished product.

For some learners, particularly in relation to learning outcome 4, a viva voce type assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will identify print technologies and techniques and give a correct but unelaborated outline of printing methods covering the areas outlined in the unit content. A learner might note, for example: 'Linocutting

is a simple print technology. To make a linocut you cut into a piece of lino and wipe ink over it, then press paper against it so that the paint comes off on the paper. This is a very cheap and crude way of making a print. It doesn't take long. All you need is a bit of lino, some cutters and a roller.'

2.1: learners will come up with a feasible idea for a print product which is an appropriate response to the assignment set, but the idea will have been arrived at quickly and without a great deal of consideration. The presentation will be rough and the idea unelaborated. The technology chosen will be appropriate to the product, will be briefly outlined, and will be within the learner's competence. Learners will identify, but not discuss, relevant considerations which might arise in trying to produce the idea. A learner might note, for example, 'This is an advert so it will have to be legal, decent and honest.'

3.1: the finished product will be recognisably related to the original idea, and will demonstrate that the learner has applied relevant techniques in its completion but with a rather rough result. Decisions which involve questions of aesthetics (such as colour or choice of fonts) will be inappropriate, or appear to have been taken without consideration.

4.1: learners will provide an overall outline review of their print production work, appropriate strengths and weaknesses of the work being noted without further comment. Points noted will be relevant to the production process and the product but will mainly be confined to a historical account of activities. A learner might note, for example, 'I decided to make a flyer to advertise my sister's band in black and white. I got some pictures of her as a toddler and copied a guitar onto it.' Accounts which are predominantly taken up with irrelevant detail (such as, 'It took my mum ages to find the pictures and when she did she found hundreds of others she thought she'd lost. She was really pleased and phoned my Aunt Doris to tell her') should not be awarded a pass. Assessment of the work itself will be relevant but very generalised and at the level of assertion. For example, 'It really looked like she was playing the guitar so I was well pleased and it made people laugh so it must have worked.'

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Researching Print Techniques and Technology	A small print company looking to expand has asked for a report on current print technologies to inform its development plans.	<ul style="list-style-type: none"> • Research plans. • Collated research data. • Presentation slides and accompanying materials. • Presentation recording.

Criteria covered	Assignment title	Scenario	Assessment method
2.1 3.1 4.1	Assignment 2 – Brief to Produce Materials to Support Product Information Campaign	A company launching a new product has commissioned printed materials to support the product information campaign that will run alongside the marketing campaign.	<ul style="list-style-type: none"> • All ideas notes, sketches and drafts. • All research documentation. • All pre-production, production and post-production work. • Finished print product. • Materials for evaluation presentation. • Recording of evaluation presentation.

Essential resources

Learners will need access to a range of print production processes from linocut printing through to high-end colour laser printing in order to produce their final products. Desktop publishing and image manipulation software (such as Photoshop or Iphoto) should be available.

Indicative resource materials

Textbooks

Adams M and Dolin P— *Printing Technology*, 5th Edition (Delmar Cengage Learning, 2001) 978-0766822320

Bann D — *The All New Print Production Handbook* (Turtleback, 2007) 978-2940361380

Banks A and Caplin S — *The Complete Guide to Digital Illustration* (ILEX, 2003) 978-1904705000

Baylis P and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Student Book (Edexcel, 2010) 978-1846906732

Baylis P, Freedman A and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Teaching Resource Pack (Edexcel, 2010) 978-1846907364

Baylis P, Holmes P and Starkey G — *BTEC First Media* (Heinemann, 2007) 978-0435464707

Hall K and Holmes P — *BTEC First in Media: A Practical Handbook* (Edexcel, 2007) 978-1846901980

McCue C — *Real World Print Production* (Peachpit Press, 2006)
978-0321410184

Speirs H — *Introduction to Printing and Finishing* (Pira International, 2003)
978-1858029066

Various — *Dictionary of Publishing and Printing* (A&C Black, 2006)
978-0713675894

Websites

www.britishprint.com — industry website with links to job outlines, profiles and opportunities in the print industry

www.printindustry.com — contains a helpful page with a glossary of key words and terms used within the industry

www.printweek.com — weekly news and information from the print industry including updates and changes in techniques and technology

www.techexchange.com/thelibrary/intro_to_DigPrint.html — a comparison of the advantages and disadvantages of analogue and digital printing methods

Unit 5: Research for Creative Media Production

Unit code: F/600/6460

QCF level: 2

Credit value: 5

Guided learning hours: 30

Unit aim

The aim of this unit is to enable learners to develop skills in the main research methods and techniques used within the creative media sector. Learners will do this through researching an existing media product and through undertaking research for one of their own production projects.

Unit introduction

Research underlies all media production, whether it be to gather materials for the content of a new production, assess technical and logistical requirements, or to establish the commercial viability of a proposed new product. Research is also undertaken into product sales and audience activity (what people buy, watch, listen to, and log on to, why they make the choices they make, what they like or dislike etc) in order to help media production companies decide what they want to make and how best to place their products in the market or the programme schedules. This audience research is also vital to advertising companies. Whatever the purpose of the research, the basic methods employed are much the same.

This unit will enable learners to develop an understanding of the basic research methods and techniques used within the creative media sector by undertaking research on an existing media product as well as undertaking research for one of their own media production projects. Through undertaking these two distinct research activities learners will learn how to identify reliable sources of information and then use them to gather relevant material. Learners will also develop skills in collecting, collating and storing the material gathered. Learners will then have the opportunity to present the results of their research.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know about research methods and techniques	1.1 outline research methods and techniques
2 Be able to use research methods and techniques to investigate an existing media product	2.1 use appropriate research methods and techniques to carry out research into an existing media product
3 Be able to use research methods and techniques to gather material for a media production	3.1 use appropriate research methods and techniques to carry out research for a proposed media production
4 Be able to present results of research.	4.1 present research results.

Unit content

1 Know about research methods and techniques

Methods: primary; secondary; qualitative, eg opinions, attitudes, behaviour patterns; quantitative, eg ratings, circulation figures, web hits

Techniques: using libraries; using the internet; reading; searching archives; interviews; observations; questionnaires; surveys; focus groups; recce

Information trail: log of library; internet and archive searches

Collate: sift and select; organise, eg by name, by date, by type, by content, by information source; index

Store: secure storage; ease of access

2 Be able to use research methods and techniques to investigate an existing media product

Media product: eg film, television programme, DVD, newspaper, magazine, radio programme, audio product, advertisement, computer game, interactive media product

Purpose of research: eg to identify composition of audience, to identify size of audience, to investigate reception of product, to compare to other similar products, to investigate production process or history

3 Be able to use research methods and techniques to gather material for a media production

Media production: eg moving image production, print production, radio production, sound recording, computer game, interactive media production

Material: eg data, information, archive material, visual, audio-visual, auditory

4 Be able to present results of research

Format: eg written report, oral presentation, PowerPoint presentation, audio-visual presentation, individual presentation, group presentation

Content: purpose; procedures; summary of data and material, eg graphics, charts, tables; analysis; results; conclusions; bibliography of sources

Expression: structure; clarity; linguistic register; recognition of audience

Delivery

The teaching of this unit should be linked to the other units that learners are undertaking for this qualification. This should allow learners to see more readily the relevance of the research tasks undertaken and will provide tutors with the opportunity to set the assignment briefs within realistic and meaningful vocational contexts.

For example, the research into an existing media product could be linked to the investigation that learners undertake in *Unit 3: The Creative Media Sector* unit or the *Unit 4: Media Audiences and Products* unit. Specialist production units should also provide the ideal opportunity for learners to explore and develop their understanding of relevant research methods and techniques for gathering material for a specific media production.

Assessment evidence that is generated through work undertaken in other units will need to be collated and organised into an appropriate portfolio of evidence for this unit. This evidence must be cross-referenced so that its context is clear.

Many learners will already have undertaken some form of research before, but may be unfamiliar with the terminology that identifies the four key research methods: primary, secondary, quantitative and qualitative. It is important that learners understand these four key terms and realise that both primary and secondary research can generate both quantitative and qualitative information, and that most valid research contains a balance of all four.

Following a brief introduction to the appropriate terminology, learners can practise the relevant procedures and skills through a series of short exercises which concentrate on specific aspects of the process – for example, identifying reliable sources of information, searching for particular information within a set time, producing a set of questions for an interview, writing a questionnaire and collating the information derived from it, setting up a focus group and writing up the results etc.

As confidence and knowledge grows, learners can then begin to link these procedures and skills together and begin to undertake more comprehensive research tasks that are linked to the investigatory and practical production work that they are undertaking in their other units. This will help to develop their research skills and also, of course, provide the evidence for assessment of these aspects of the unit.

One of the key research skills at this level is to be able to sift through the information in the collation and storage process and then make use of only the genuinely relevant material. Learners should therefore be taught the need to discard information that is not relevant. This is particularly important in relation to internet research, where there is strong temptation for inexperienced researchers to print off reams of information, much of

which is inapplicable and a good deal of which is likely to be of dubious relevance, and simply file it away with no further action and a rather complacent sense that 'the job has been done'.

Collation is not, of course, just about sifting. It is also about sorting, and this is probably the most difficult skill to learn. Tutors might find it useful to set up short exercises in which the information is already provided and learners are required to sort through it and sift out the material which is useful for a given purpose. Later exercises might then require them to list the material in order of value.

Learners will initially need guidance in structuring reports, whether written or orally presented. Again, clearly defined exercises using given material may be found useful in the early stages here. The importance of clear structure, clear expression and of adopting the appropriate formal linguistic register should be stressed at all times.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit, links to other units and unit assessment.
Introduction to primary research (two sessions): <ul style="list-style-type: none">• interviewing techniques• questionnaire design• focus groups• surveys.
Task 1 – evaluating primary research. Working individually and using the class as the sample group, learners research music preferences within the class using interviews and questionnaires. Learners: <ul style="list-style-type: none">• prepare interview questions• conduct interviews• collate data• prepare questionnaires• give out and collect back questionnaires• collate data.
Introduction to sources of information.

Topics and suggested assignments and activities

Task 2 – evaluating secondary research sources.

Learners work in pairs:

- all pairs are given the same questions to find answers to
- each pair is allowed to use either internet or library, but not both
- pairs race to get the answers first
- plenary session evaluates the different sources in terms of
 - speed
 - accuracy
 - ease of use.

Assignment 1 – Methods and Techniques.

Learners write up individual reports on the two tasks describing and comparing research methods and techniques.

Introduction to planning research.

Assignment 2 – Research into an Existing Media Product.

Learners:

- plan research into an audience for and reception of a specified computer game using research methods and techniques already discussed
- carry out research
- collate results
- prepare presentations
- present results.

Assignment 3 – Research into a Proposed Media Production.

Learners:

- plan research into a proposed media production using research methods and techniques already discussed
- carry out research
- collate results
- prepare presentations
- present results.

Assessment

Evidence for assessment

Assessment evidence for this unit will most likely be drawn from assignments written around other units. Where that is the case, the criteria from this unit must be referenced within those assignments.

Evidence for the achievement of learning outcome 1 is likely to be in the form of a written report or oral presentation, though it could also be in an audio-visual or electronic format.

Evidence for the achievement of learning outcomes 2 and 3 should come from work done for other units, as explained above. Documentation should include all research notes, research logs, and collated research data.

Evidence for the achievement of learning outcome 4 will be provided through the presentation of the results obtained through the work done for learning outcomes 2 and 3, either in a written report or oral presentation. Presentations must be recorded for internal and external verification purposes.

It should be noted that assessment evidence that is generated through work undertaken in other units will need to be collated and organised into an appropriate portfolio of evidence for this unit and must include any necessary cross-referencing.

Viva voces and tutor observations may be used to support the assessment of achievement of learning outcomes 1 and 4, but should not form the sole method of assessment, as the independent presentation of research processes and results is an important element of what is being learned here. When more than one learner in a cohort is assessed by means of a viva care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will provide unelaborated outline but correct summaries of the four research methods and the techniques used in undertaking them. If any illustrative examples are offered they will lack detail and may well not be appropriate. There will be no comparison or evaluation of the methods. Learners' documentation will show some evidence of research trails (though these will be somewhat thin), collation of results (albeit rather disorganised) and storage of materials.

2.1 and 3.1: learners will use appropriate methods and techniques to carry out two specific pieces of research. The methods and techniques used will be appropriate but will be employed at a basic level only and learners may have needed considerable support and guidance in order to follow the correct processes and procedures. The research material gathered will be filed in some sort of order (either in paper or electronic form, or both) in such a way that any specified item of information can be accessed, but not without going through a fair amount of material to get to the relevant information. Results will be presented in a list-like manner without comment – ‘I learned such and such from X ...’. There will be no assessment of the value of the results.

4.1: learners will provide a simple, unelaborated summary of the results of the research and of the research processes and procedures undertaken. The outline will cover the main or most obvious elements and will be for the most part, and in relation to the most important aspects of what is being described, accurate.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Methods and Techniques	Carry out exercises in research methods and techniques to evaluate them.	<ul style="list-style-type: none"> • Interview questions. • Questionnaires. • All notes and completed questionnaires. • All collated data. • Research notes and logs. • Completed report.

Criteria covered	Assignment title	Scenario	Assessment method
2.1 4.1	Assignment 2 – Research into an Existing Media	Employ a range of appropriate research methods and techniques to carry out research into an existing media product.	<ul style="list-style-type: none"> • All research notes. • Research log. • Collated research data. • Presentation slides and notes. • Recording of presentation.
3.1 4.1	Assignment 3 – Research into a Proposed Media Production	Employ a range of appropriate research methods and techniques to carry out research for a proposed media production.	<ul style="list-style-type: none"> • All research notes. • Research log. • Collated research data. • Presentation slides and notes. • Recording of presentation.

Essential resources

Learners will need access to a full range of research resources, both paper based and electronic.

Indicative resource materials

Textbooks

Baylis P and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Student Book (Edexcel, 2010) 978-1846906732

Baylis P, Freedman A and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Teaching Resource Pack (Edexcel, 2010) 978-1846907364

Baylis P, Holmes P and Starkey G — *BTEC First Media* (Heinemann, 2007) 978-0435464707

Berger A — *Media Research Techniques, 2nd Edition* (Sage, 1998) 978-0761915379

Hall K and Holmes P — *BTEC First in Media: A Practical Handbook* (Edexcel, 2007) 978-1846901980

Stokes J — *How to do Media and Cultural Studies* (Sage, 2003)
978-0761973294

Websites

www.barb.co.uk — the Broadcasters' Audience Research Board

www.nrs.co.uk — the National Readership Survey

www.ofcom.org.uk — the independent regulator for the UK communications industries

www.rajar.co.uk — Radio Joint Audience Research Limited

Unit 6: Video Production

Unit code: H/600/6483

QCF level: 2

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to provide learners with an opportunity to create a video production, the focus of this unit being on the application of the production phases – pre-production, production and post-production. The unit also requires learners to reflect on the final product and their working practices.

Unit introduction

The term 'video production' encompasses a wide variety of moving image production activity, from one person working independently to major television companies producing prime-time entertainment.

This unit introduces learners to the techniques and technology of video-based production work. Learners will develop an understanding of the three production stages – pre-production, production and post-production.

Learners will work individually on the pre-production stage, developing an idea into a proposal, scripting and storyboarding it. They will also complete other pre-production activities on their own to ensure that they have a good grasp of this process.

They will work as part of a team for the second two phases to complete a video product. On completion of the product, learners will review their contribution to the production process and to the quality of the product.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to carry out pre-production for a proposed video product	1.1 apply video pre-production techniques to the creation of a video product
2 Be able to contribute in a technical capacity to the creation of a video product	2.1 undertake a technical role in the creation of a video product
3 Be able to carry out post-production for a video product	3.1 apply video post-production techniques to the creation of a video product
4 Be able to review own video production work.	4.1 review strengths and weaknesses of own video production work.

Unit content

1 Be able to carry out pre-production for a proposed video product

Proposal: ideas; audience; proposal document

Pre-production: script; storyboard; shooting script (shot type, length of shots, dialogue, directions, audio); personnel required; crew roles; locations; permissions; budgets; notes of meetings; equipment booking; schedules; health and safety, eg risk assessments, electrical cables, lifting and carrying

2 Be able to contribute in a technical capacity to the creation of a video product

Technical production roles: eg camera, lighting, sound, director

Contribution: eg camera set-up, camera movement, white balance, framing, shot type, shot length, lighting set-up (redheads, blondes, spots, gels), microphone set-up, sound levels, sound effects (SFX), direct actors, direct film crew

3 Be able to carry out post-production for a video product

Post-production: labelling; storage; logging (length of shots, shot descriptions, audio, suitability); edit decision list; editing techniques, eg continuity, montage, flashbacks; transitions, eg fades, wipes, dissolves; sound track; delivery format

4 Be able to review own video production work

Finished product: compared with original proposal; appropriateness to audience; technical qualities; aesthetic qualities; content; style; team contribution

Production process: pre-production; production; post-production; time management; technical competencies; creative abilities; teamwork

Sources of information: notes from meetings; drafts; production log (creative decisions, production issues, summary of events); comments from others, eg audience, peers, tutors, client

Delivery

Video production is a combination of individual and group activities. This unit is designed to recognise that fact and to introduce learners to the realities of individual and group production work. It is important for tutors to recognise that each learner must develop, individually, an understanding of the various stages of the video production phases. It is also important for the learner to understand how each role works throughout the three production phases.

In order for learners to progress their work through the production and post-production phases they will need to learn how to use the camera, lighting and sound equipment, and how to edit. This can be done through initial instruction followed by some short exercises which will familiarise them with the equipment they will be using. Learners will require time to develop an understanding of how to capture footage, use the editing software and how to export their work in the correct format.

Whether this is done at the beginning of the unit or just before they start these phases of the work is up to individual centres to determine, but there is much to be said for starting with some practical work to enthuse learners.

Learners must generate their own ideas, pre-production work and proposal individually. However, as learners must work in a team during the production phase of this unit product, it follows that they will not all undertake every role in a video production process. Tutors must therefore ensure that all members of the group have a substantial role relating to video production work. Potential roles for the production phase would be as listed in the content – director, camera, sound and lighting. Each role must, of course, enable the learner undertaking it to produce individual evidence for assessment. As learning outcome 3 requires learners to produce their own edit of the final product, each learner will be able to present individual evidence of their editing during the post-production phase.

It is important for learners to understand what is required at each phase of production and what the production crew roles and responsibilities are within a production team. The next stage is for each learner to individually develop ideas for a production. They should be encouraged to consider target audience and develop focused research, while developing ideas and proposals. At this stage a range of ideas and possibilities should be investigated. Each learner must then progress their final idea through the pre-production phase. The final idea that is to be put forward for going into production could be structured into a proposal or presented as a pitch. Wherever possible, pre-production techniques should be taught through professionally produced illustrative material – scripts, storyboards, schedules etc – as should the writing of proposals.

Once each learner has developed ideas, researched them, and developed one idea through pre-production, they can then pitch their idea. An appropriate selection of the best ideas can then be taken to the next stage.

Learners are required to form small groups for the production phase. At this point it will be useful for learners to do further research into their role. It would also be of benefit for learners to have access to industry professionals to inspire their learning at this point. All crew roles must be substantial enough to generate clear individual evidence for assessment. The suggested crew roles are: director, camera, lighting and sound.

Learners should keep production logs as supporting evidence for assessment criterion 1.1. It may also help if tutors maintain observation reports to back up learners' individual contributions to this phase.

Once all footage has been shot for the production, learners can engage in the final phase of the production process – post-production. Each learner will work individually in the post-production phase, using the same footage as the rest of their group to edit their own version of the video. They should have the opportunity to discuss their individual development in this final phase of production in a post-production log.

Finally, learners are required to review their own work. This could include feedback from a range of sources about their final product which might be from the client (if there is one), the other members of their production group, their tutors or from a sample target audience. The review can take the form of a written report, presentation, video diary, blog, or other appropriate format.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to the unit and its requirements.
Introduction to camera, lighting and sound equipment.
Activities – exercises in use of camera, lighting and sound equipment.
<p>Introduction to video production.</p> <p>Through a worked example of a product (of relevant genre), eg a music video or a short drama, learners analyse the product in groups to develop an understanding of the requirements at each stage of production. It is important to see the stages that an 'actual' product has gone through. Through tutor-led discussion and a series of group (small groups) exercises learners will analyse and consider:</p> <ul style="list-style-type: none"> • the stages of production and their requirements (pre-production, production and post-production) • documentation required at each phase of production • crew and crew roles, who has done what in the creation of this product.

Topics and suggested assignments and activities

Assignment 1 – Pre-production.

Working individually learners will:

- generate ideas for productions
- analyse the production requirements for each idea generated
- assess the pros and cons of each idea and decide on one idea to develop in pre-production
- prepare a proposal for that idea
- develop chosen idea through the pre-production phase
- decide recording format
- devise budget
- produce script
- produce storyboards
- find locations (if necessary)
- establish permissions for locations (if necessary)
- determine personnel required
- determine equipment requirements
- complete health and safety risk assessments
- produce shooting script.

Each learner will then pitch their chosen idea to the class.

Class will then vote on an appropriate number of ideas to be developed through to production and post-production.

Assignment 2 – Production.

Small production groups are formed (maximum of four) and each one is assigned one of the selected ideas.

Group then:

- assigns crew roles: camera, lighting, sound and director
- shoots footage
- reviews footage, assesses suitability and shoots pick-ups where necessary.

During production phase each learner must keep a production log which:

- documents the production process
- notes how individual role has contributed to that process.

Introduction to editing software.

Activity: exercises in using editing software.

Topics and suggested assignments and activities

Assignment 3 – Post-production.

Working individually learners:

- log footage
- assess the suitability of recorded material
- create an edit decision list
- edit footage
- export the final project in the desired format.

During this process, each learner must keep a post-production log.

Assignment 4 – Review.

Learners:

- discuss final product with rest of group
- discuss final product with tutor
- gather audience response to final product
- review production and post-production logs
- write up review of final product.

Assessment

Evidence for assessment

Evidence for achievement of learning outcome 1 will take the form of written notes, drafts, sketches, research notes, other pre-production documentation and a proposal. Learners could also do a pitch based on the proposal (pitches must be recorded for verification purposes).

Evidence for achievement of learning outcome 2 will be rushes, production notes, production paperwork, production logs and tutor observation records. Logs can be either written or recorded.

Evidence for achievement of learning outcome 3 will be the learner's edit of the final product and relevant post-production paperwork such as edit decision lists, screen dumps, editor's notes and a post-production log.

Evidence for achievement of learning outcome 4 could be written notes, a report, a presentation, notes in a studio log, annotations to a script, editor's notes, video diaries or a viva voce assessment. When more than one learner in a cohort is assessed through a viva care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will apply pre-production techniques at a basic level. Ideas will be stated briefly and will tend towards the obvious or the impracticable. Scripts, storyboards and other such documentation will be roughly sketched out, and the proposal will be a brief outline.

2.1: learners will carry out a technical role in production to a basic standard, and will be hampered in expressing their intentions fully by their limited grasp of technology and skills. For example, camera work may be badly framed, sound levels and lighting continuity will be inconsistent, or the shoot will lack clear organisation. Production paperwork or notes will be brief and the production log will focus mainly on a historical account of what the learner has done.

3.1: again, learners will be hampered in expressing their intentions fully by their limited grasp of technology and skills. Shots will not match up when edited together and the final product will generally lack pace. Sound levels will vary quite widely from one shot to another. Transitions will be used, but

without consideration to how they affect the reading of content. Edit decision lists, screen dumps and editor's notes will be brief. The post-production log will focus mainly on a historical account of what the learner has done.

4.1: learners will provide an overall outline review of their own production work ('work' meaning both the process and the product resulting from following that process), identifying strengths and weaknesses in their work but without further elaboration or comment. Any description of activity will mainly be confined to a historical account (for example, 'We had a script meeting and wrote the script, then we did the storyboard which Ashe drew. We spent five days on the shooting and another three on the editing ...' etc). Accounts which are mostly taken up with irrelevant detail should not be awarded a pass. Description of the product will be an unelaborated outline and assessments of its quality will be relevant but very generalised and at the level of assertion (for example, 'The shoot went quite well and the final edit was good').

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Pre-production	Learners take part in a competition to produce an advertisement for a government-sponsored anti-drugs campaign. The competition brief requires a fully worked out and costed proposal which will be pitched to the campaign organisers.	<ul style="list-style-type: none"> • All notes on initial ideas. • All notes on research. • All pre-production documentation. • Proposal. • Slides for pitch and recording of pitch.
2.1	Assignment 2 – Production	Learners form production companies to produce the videos that have been selected for production.	<ul style="list-style-type: none"> • Production paperwork for own role. • Rushes.

Criteria covered	Assignment title	Scenario	Assessment method
3.1	Assignment 3 – Post-production	As above.	<ul style="list-style-type: none"> • Tape logs. • Edit decision lists. • Screen dumps (annotated). • Final exported product in correct format. • Post-production log.
4.1	Assignment 4 – Review	End of production report to client.	<ul style="list-style-type: none"> • All collated feedback. • Report.

Essential resources

For this unit learners should have access to appropriate production equipment. This will include: digital video cameras, tripods and, if possible, other camera support systems, lighting and sound equipment. Learners will need access to computers with appropriate editing software to edit their footage. For example they might use: iMovie, Final Cut Pro, Premiere Pro or other equivalents.

Indicative resource materials

Textbooks

Baylis P and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Student Book (Edexcel, 2010) 978-1846906732

Baylis P, Freedman A and Procter N — *Edexcel Level 2 BTEC First Creative Media Production*, Teaching Resource Pack (Edexcel, 2010) 978-1846907364

Baylis P, Holmes P and Starkey G — *BTEC First Media* (Heinemann, 2007) 978-0435464707

Cleve B — *Film Production Management* (Focal Press, 2005) 978-0240806952

Evans R — *Practical DV Film Making* (Focal Press, 2005) 978-0240807386

Hall K and Holmes P — *BTEC First in Media: A Practical Handbook* (Edexcel, 2007) 978-1846901980

Jones C and Jolliffe G — *The Guerrilla Film Makers Handbook* (Cassell, 2006) 978-0826479884

Kindem G and Musburger R — *Introduction to Media Production* (Focal Press, 2009) 978-0240810829

Millerson G and Owens J — *Video Production Handbook* (Focal Press, 2008) 978-0240520803

Musburger R — *Single-Camera Video Production* (Focal Press, 2005) 978-0240807065

Rabigner M — *Developing Story Ideas* (Focal Press, 2006) 978-0240807362

Small R — *Production Safety for Film, Television and Video* (Focal Press, 2000) 978-0240515311

Website

www.bfi.org.uk/education/ — the educational section of the British Film Institute web

Unit 7: 2D Animation Production

Unit code: J/502/5663

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The unit focuses on developing learners' skills in the production of 2D animations using traditional or digital techniques, or a combination of the two. Learners will work on design, character, setting and narrative whilst also developing production techniques.

Unit introduction

Learners will research the content and production techniques used in historical and contemporary examples of work. Learners will develop understanding in such things as persistence of vision, frame rates, stop-frame techniques and the production of cells. This background will inform planning and production of work using traditional methods or some of the digital tools for 2D animation. In order to develop their understanding and skills, learners will need to keep their intended audience constantly in mind, and to that end their animation work will be exhibited to audiences after completion and responses evaluated.

Animation has become an increasingly important media form and examples can be seen in platforms as different as advertising, feature films, mobile phone content, the internet and television. Good animation skills are also important in the computer games industry.

The animation industry includes both large production companies and individuals working on small digital projects. Animation on all scales requires people with fresh, exciting ideas for new work, whilst larger companies will need individuals with specialist skills, such as storyboarding and 'tweening,' or the evidence to prove that they can develop them. This unit provides learners with the opportunity to develop their competence in both areas of work. Learners will also be encouraged to experiment with both content and technique.

To have a successful career in animation requires, first of all, good drawing skills, as these are a key requisite to get into the industry. Second, it requires the ability to develop fresh ideas for content which will engage the chosen audience. Also, a good animator will take into account at all stages the role of animation as communication, whether this be for entertainment or information. It always aims to move beyond simply creating moving shapes on a screen.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the techniques and development of 2D animation	1.1 summarise accurately the techniques and development of 2D animation with some appropriate use of subject terminology
2 Be able to devise a 2D animation with soundtrack	2.1 generate outline ideas for a 2D animation with soundtrack, working within appropriate conventions and with some assistance
3 Be able to produce a 2D animation with soundtrack	3.1 produce a 2D animation with soundtrack with some assistance
4 Be able to evaluate audience responses to own 2D animation work	4.1 comment on audience responses to own 2D animation work with some appropriate use of subject terminology.

Unit content

1 Understand the techniques and development of 2D animation

Techniques: traditional 2D animation (flick book, cel animation, rotoscoping, drawn on film, photographic stills); digital techniques for 2D animation (2D bitmap graphics, 2D vector graphics); application software, eg Flash, After Effects, Anime Studio, Toon Boom Studio, Powerpoint

Development: pioneers, eg Joseph Plateau (phenakitoscope), William Horner (zoetrope), Emile Reynaud (praxinoscope), Edward Muybridge, Edison (kinescope), Lumière brothers; developers, eg Walt Disney, Hannah Barbera, Warner Bros, Norman McLaren, Len Lye; contemporary work, eg *Monty Python*, *Yellow Submarine*, *A Scanner Darkly*, *Persepolis*; genres and forms, eg cinema, advertising, children's television, music videos, computer games, mobile phones, websites

2 Be able to devise a 2D animation with soundtrack

Choice of possible formats: suitability for resources available; appropriateness for chosen style, eg stop-frame techniques, flip book, animatic, filmstrip, time lapse photography, sequential photographs, collage, index cards, cut-out animation, cell animation, mark making on film

Generation of ideas: visualisation; characters; backgrounds; storylines; audio; working within technical limitations

Consideration of audience appeal: definition of audience, eg by age, by gender, by interests; taste; viewing context

Planning: designs; drawings; storyboarding; consideration of movement; continuity; frames per second; perspective; soundtrack design; point of view, eg changes or extents of an action or movement

3 Be able to produce a 2D animation with soundtrack

Components of production: format; camera ready content; narrative; music; special effects; cuts; transitions; timing; frame numbers; dope sheets

Camera: framing; angle; movement; lighting; appropriate point of view

Post-production audio: soundtrack; dialogue; synchronisation; levels scanning; use of software; key frames

For digital production: use of software application, eg Flash, Photoshop, After Effect, Anime Studio, Toon Boom Studio, Powerpoint

4 Be able to evaluate audience responses to own 2D animation work

Showing work to audiences: eg local screenings, festivals, websites

Identifying criteria for feedback: genre; content; style; narrative; character; techniques; technical qualities; aesthetic qualities; creative qualities

Collecting audience responses: discussions; questionnaires; reviews; focus groups; feedback from online exhibition

Reporting findings: eg oral presentation, written report, action plan, review

Delivery

Successful delivery of this unit should begin by establishing for learners that the importance of animation has grown in recent years. Even brief discussion is likely to demonstrate that much animation work is now shown on mobile phones, 2D games, the internet, music video and advertising as well as more traditionally in television and film. Learners may well be aware of the success of recent animated feature films, the companies which produced them (such as Disney and Pixar) and the fact that the audience for animation is not limited to children. Learners are likely to have some background awareness of the role of digital techniques in animation production and should be encouraged to reflect on this. They should also understand, however, that although digital packages are frequently used, core skills such as drawing are still needed in the industry.

Consideration of the development of 2D animation and the techniques used to produce it can be encouraged through tutorials, lectures and screenings. Research by individual learners, especially in relation to material screened online, is another strategy likely to be productive. The outcomes of this research could be shared by learners in the form of a screening and presentation within a seminar session.

Visits to studios, screenings and exhibitions are also likely to provide material to support the understanding of techniques and styles of animation, its development and current position. These activities should, in turn, inform the planning and production processes used in practical work. Contact with aspects of the animation industry is highly desirable. Centres should aim to develop contacts with studios or freelance animators or individuals with specific relevant skills such as designers, illustrators or software experts. These professionals can provide learners with awareness of industry practice, offer insights through discussion of both professional and learner work and inform the design of assignments to ensure that their relevance to industry practice. In addition, learners can obtain valuable insights through accessing material where animators discuss the techniques used to make their work. Much of this exists on DVD, in books and on websites.

Learners will need to be made aware of the wide variations existing in the animation industry. Whether through lectures, research or contact with professionals, it is important that learners are aware that the needs of large production companies and individual professionals working on small digital projects can be quite different, though animation on all scales requires people with fresh, exciting ideas for new work. Centres should ensure that learners have insight into more than one type of company and the employment opportunities it might provide: smaller companies are likely to require multi-skilled individuals whilst larger companies will need individuals with specialist skills such as storyboarding, or the evidence to prove that they can develop them.

Workshops and demonstrations will be required to illustrate the production potential of the facilities available. Centres should aim to bring learners into contact with work produced through as wide a range of techniques as possible. Learners should have the chance to become familiar with any software applications prior to undertaking the production stage. Short, non-assessed projects are an effective way of developing familiarity with the functions and potential of a piece of software prior to an assignment. Learners should be encouraged to experiment within this unit and to be aware of the industry need for fresh, dynamic ideas and designs.

Centres should be sure that learners are aware of methods used to gather and interpret audience responses whilst still at the design stage, both to inform the content of the piece and to devise appropriate exhibition and feedback activities. Learners should be encouraged to explore ideas for character and narrative structure, perhaps through a series of tutorials where ideas can be pitched at a tutor or visiting professional.

Production management techniques will be key to learners using time and resources effectively in their animation work. This unit offers learners an opportunity to implement skills acquired elsewhere in their programme as well as an opportunity to develop techniques in planning, logging and scheduling.

Learners will need the opportunity to screen their work to members of a relevant audience. As a minimum this could simply involve using other members of their class as audience and recording their responses in one of the ways identified. More challenging for learners would be organising a public screening or contributing work to an existing event involving a wider public, including members of the target audience. Entering work festivals or publishing work on line and recording responses would be valuable, although with internet exhibition learners will need to be aware of the issues around the authenticity of respondents to online questionnaires.

Formal lectures and tutorials are likely to be most appropriate for providing information about the various techniques of methods of recording audience response and the strengths and weaknesses of each.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities

Introduction to unit and unit assessment.

Screenings of productions demonstrating:

- principles of animation and persistence of vision
- techniques, formats and styles
- range and development of 2D animation
- applications capable of 2D animation.

Assignment 1 – 2D Animation Past and Present.

Learners receive brief from a publisher to produce a chapter, illustrated with stills, on the history of 2D animation techniques. The book is aimed at 10-12 year old children.

Visiting animator with demonstration of her work.

Workshops:

- drawing character and background
- use of digital applications to create character and background
- creating ideas
- narrative
- planning, logging and scheduling techniques
- soundtrack production.

Exercise using software to create a simple 2D character animation.

Illustrated lectures:

- communicating with an audience
- identifying mode of address and audience appeal in example productions
- methods of recording audience response and the strengths and weaknesses of each.

Visit to studios, screening or exhibition.

Assignment 2 – Five a Day.

Learners receive a brief to produce a 30 second 2D animation for a public service campaign aimed at encouraging primary school children to eat more fruit and vegetables.

Learners will:

- prepare treatment identifying the content of proposed animation
- prepare drawings and designs for characters and backgrounds
- prepare initial storyboards
- design soundtrack
- discuss treatment with visiting professional.

Topics and suggested assignments and activities

Assignment 3 – Production.

Production of animation developed in Assignment 2.

Learners must keep a production log throughout the production process.

Assignment 4 – The Moment of Truth.

- prepare screening to a group of primary school children
- gather audience feedback
- collate and analyse feedback
- write up evaluation of the animation.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcome 1 could be an oral presentation, video blog, or a portfolio of work on techniques which have been significant in the development of animation and on current techniques. The presentation could be illustrated with a screening of clips and the report or portfolio illustrated by screen grabs. Presentations must be recorded for the purposes of internal and external verification.

As evidence of achievement of learning outcome 2 learners could present a treatment identifying the content of a proposed animation along with drawings and designs for characters and backgrounds, storyboards and other appropriate pre-production documentation. They might also give a presentation or pitch on their proposal — ideally to a visiting practitioner.

Evidence for achievement of learning outcome 3 will be a piece of animation with soundtrack. This could be an advertisement, a channel ident or a short piece of narrative lasting from 15 seconds to one minute. It must be clear, in the case of group work, which learner is responsible for which elements of the concept, design and production. It must also be clear which learner has produced drawings, collage, photographs or other 2D work, including the use of animation software. Evidence of camera operation and direction will also be required, along with soundtrack production and video post-production techniques. Learners are required to generate evidence for all grading criteria and, whether learners are working individually or in groups, centres may need to set assignments which require two or more pieces of animation in order for this to be possible within the context of group work. The technical skills demonstrated must show use of one of the recognised animation techniques covered by this unit.

Achievement of learning outcome 4 could be evidenced through a written report, an oral presentation or some form of structured audio-visual statement. Presentations should be recorded for the purposes of verification. Learners will need to screen their work in front of an audience or arrange for their work to be uploaded to a website in order for audience members to view the production and respond to it.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: at this level the learner will provide a brief summary of the development of animation, correctly identifying through brief outline descriptions the various techniques developed, and placing them accurately in the time-line. Reference will be made to key figures in the history of animation from the earliest to some contemporary practitioners.

2.1: learners will provide an indication of how the proposed animation will be produced and how the style is appropriate to the content. The intended audience will be briefly described, together with possible screening plans. Drawings and designs for characters and backgrounds will be provided although they will not be totally clear. Storyboards will indicate storyline, camera movement and soundtrack but will fall short of a detailed approach. A production schedule will also be provided but will lack detail and may be unrealistic in one or two places.

3.1: at this level the content and style of a production is likely to be predictable and conventional and the motion of the animation may not be fluent. Sound will have some problems – for example, levels will be inconsistent or will not synchronise accurately.

2.1 and 3.1: learners will have required support and encouragement during both the planning and the production processes. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this criterion.

4.1: learners will arrange a screening to a small and possibly unrepresentative audience and are likely to require assistance and support in organising that. They will arrange a brief recorded discussion or devise basic questionnaires in order to record audience response. Responses will be used without further comment or discussion and will be at the level of unsupported assertion. The learner might write: 'Most of the audience enjoyed the animation. They liked the figures I used but did not like the red background.'

1.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – 2D Animation Past and Present	Learners receive brief from a publisher to produce a chapter, illustrated with stills, on the history of 2D animation techniques.	<ul style="list-style-type: none"> All preparatory and research notes. Finished chapter.
2.1	Assignment 2 – Five a Day	Learners receive a brief to produce a 30 second 2D animation for a public service campaign aimed at encouraging primary school children to eat more fruit and vegetables.	<ul style="list-style-type: none"> All pre-production documentation. Treatment. Pitch presentation slides, handouts and notes. Recording of presentation.
3.1	Assignment 3 – Production	As above.	<ul style="list-style-type: none"> Finished animation. Production log.
4.1	Assignment 4 – The Moment of Truth	Learners create a focus group to get feedback on their animation.	<ul style="list-style-type: none"> Notes on audience feedback. Completed evaluation.

Essential resources

Hardware and software should reflect industrial standards where appropriate. It should include animation production and editing facilities, a rostrum camera and studio facilities for filming.

Learners will need access to rostrum camera, animation table and lighting, as well as camera equipment capable of frame capture and remote shutter control. Many DV cameras come with animation modes and whilst some of these are less than frame accurate, their use can be combined with existing video editing applications. A wide range of animation software is available from domestic to industrial. Of these, Toonboom may be of interest to

centres. Some software companies offer frame capture applications whilst the potential of Flash, Photoshop and After Effects for animation is well documented.

This unit involves 2D animation produced by traditional or digital means or a combination of both. Space for learners to draw and cut may be required for the production of collages, cells or backgrounds.

Library resources providing DVD resources, as well as relevant and current information on animation, filming techniques and digital animation and contemporary film makers will be needed.

Centres are recommended to develop their own list of web links and multimedia research material.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Beck J — *Outlaw Animation: Cutting-edge Cartoons from the Spike and Mike Festivals* (Harry N Abrams, 2003)

Chi Hang Li — *The Complete Guide to Anime Techniques: Create Mesmerizing Manga-Style Animation with Pencils, Paint, and Pixels* (Barron, 2006)

Furniss M — *The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash* (HNA, 2008)

Grant J — *Masters of Animation* (Watson Guptill Publications Inc, 2001)

Hartas L — *How to Draw and Sell Digital Cartoons* (ILEX, 2004)

Taylor R — *Encyclopaedia of Animation Techniques* (Focal Press, 2002)

Wiedemann J — *Animation Now!* (Taschen, 2004)

Williams R — *The Animator's Survival Kit* (Faber & Faber, 2002)

Webites

www.cartoon-factory.com/jones.html — animation art gallery

www.toonboom.com/products — animation software

www.skillset.org — current animation industry

www.theanimationartgallery.com/ — the Animation Art Gallery

www.thefirstpost.co.uk/9804/features/animation-gallery — contemporary animation work on line

www.anvil.clara.net/ani11.htm — links to sources about the development of animation

Unit 8: 3D Animation

Unit code: H/502/5668

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to the theory and use of 3D animation software. Learners will develop an awareness of how 3D animations are displayed on a computer screen and investigate the geometric theory underlying 3D animation work. Learners will plan and produce a 3D animated scene and reflect critically on their own work.

Unit introduction

3D animation is the art of creating moving images by means of 3D computer graphics. Sometimes the platform for the animation is the computer itself, sometimes it is another medium such as film. These animations are referred to as 'computer-generated images' (CGI). 3D animators are responsible for the portrayal of movement and behaviour. Most often this is applied to give life to characters and creatures, but sometimes animations are applied to other elements such as objects, scenery, vegetation and environmental effects. Specialist software packages are used to create the animations and animators will portray movement and behaviour in an efficient and effective way which makes best use of this technology. Depending on the platform for which the animation is designed they will maximise the opportunities for interactivity.

In this unit learners will have the opportunity to use a 3D animation software application to produce a 3D animated scene. 3D animation concepts are complex and in this unit learners are encouraged to research the use of 3D animation within the interactive media and computer games industries. Learners will develop an awareness of how 3D animations are displayed on a computer screen. An appreciation of the geometric theory underlying 3D work will help learners understand the technical language used by animators.

Learners following this unit will have the opportunity to devise and develop original ideas from interpreting creative briefs and considering potential target audiences. Learners will develop skills in drafting pre-visualisation sketches and storyboards. Developing these planning skills will form a habit of preparation and workflow management of value to any entrant to the interactive media industry.

Through study of this unit, learners will develop practical computer animation skills and will create 3D animations using a range of techniques including key frame animation and rendering.

This unit will also develop the learners' ability to reflect critically on their own work, as they will need this professional skill in any future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand theory and applications of 3D	1.1 summarise accurately theory and applications of 3D using some subject terminology appropriately
2 Be able to devise a 3D animation	2.1 generate outline ideas for a 3D animation working within appropriate conventions and with some assistance
3 Be able to create a 3D animation following industry practice.	3.1 create a 3D animation following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand theory and applications of 3D

Applications of 3D: uses, eg environments, models, product design, animations, TV, film, web, games, education, architectural walk-through

Displaying 3D polygon animations: application programming interface, eg Direct3D, OpenGL; graphics pipeline, eg modelling, lighting, viewing, projection, clipping, scan conversion, texturing and shading, display; rendering techniques (radiosity, ray tracing); rendering engines; distributed rendering techniques; lighting; textures; fogging; shadowing; vertex and pixel shaders; level of detail

Geometric theory: vertices; lines; curves; edge; polygons; element; face; primitives; meshes, eg wireframe; coordinate geometry (two-dimensional, three-dimensional); surfaces

Mesh construction: box modelling; extrusion modelling; using common primitives, eg cubes, pyramids, cylinders, spheres

3D development software: software, eg 3D Studio Max, Maya, Lightwave, AutoCAD, Cinema 4D, Softimage|XSI; file formats, eg .3ds, .mb, .lwo, .C4d, .dxf, .obj; plug-ins

Constraints: polygon count; file size; rendering time

2 Be able to devise a 3D animation

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; sketches; pre-visualisation (concept drawings, storyboards)

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, representation (race, gender, religion, sexuality), decency

Specification: target audience; key visual themes; storyboards; constraints, eg polygon count, image resolution, frame rate, output size and aspect ratio, file type, file size

3 Be able to create a 3D animation following industry practice

Plan: asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Software interface: files, eg loading, properties, merging, replacing, importing, saving, backup and auto-saving; viewports, eg viewport configuration, viewport controls; workspace, eg command panels, floating palettes and toolbars, drawing aids; animation controls, eg time, trajectories, pivot points, forward kinematics, inverse kinematics, morphing, effects, key frames and playback

Animation: layers; object naming conventions; tools, eg move, stretch, rotate pivot points, linking, kinematics, skeletons, deformations, skin, particle systems, real-world physics

Animation techniques: time-based (animating with key frames); motion control; kinematics (inverse, forward); staging the animation, eg lights, cameras, supports, tripods; biped; deformations; paths/trajectories; effects, eg motion blur, glow, particle systems, real-world physics; object hierarchies; parent-child inheritance and relationship

Animation process: animating, eg objects, lights, cameras, textures, morphs and transformations

Virtual camera: cameras, eg target, free, camera view; camera parameters, eg lens length, field of vision (FOV), focus, depth of field aperture; camera animation

Lighting techniques: light types, eg ambient, distant, area, spot, point, linear, photometric, raytraced; lighting controls and effects, eg projector, attenuation, colour, shadows; atmospheric, eg clouds, smoke, fire; volumetric, eg fog, mist

Texturing techniques: texturing process, eg creating, loading textures, applying textures; using materials, eg materials editor, mapping materials, material modifiers; material types, eg bitmap, procedural, using avi video files as textures

Rendering: scene rendering, eg rendering controls, rendering options, output size and aspect ratio, safe-frame, file type, file size; image resolution, eg TV, film, game, web

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, animation specification, workflow and time management, technical competence, teamwork)

Delivery

It is suggested that teaching follows the order of the learning outcomes, teaching the concepts and principles of 3D initially, followed by generating ideas and planning 3D animations and finally production of imaginative 3D animations.

This unit could be taught through a variety of activities including lectures, group discussions, practical sessions and demonstrations. The largest proportion of time should be spent in practical sessions using 3D animation application software though an emphasis should also be put on developing and refining drawing skills, as these are fundamental to 3D animation work.

Formal lectures and independent study will be the main methods used to teach the understanding of concepts and the principles of 3D. Learners could research a range of contemporary 3D animation work and investigate how professional 3D animators incorporate their work into a range of multimedia applications.

Learners will need to appreciate the application of 3D and the principles of 3D geometric theory, mesh construction and the developments of 3D animation software. They will also need to understand the features of a 3D animation application and the techniques and methods used in the development of 3D animations. All this can be achieved through a mix of formal lectures, independent study and the practical use of 3D animation software to create animations. Learners will need access to a range of 3D design tools and plug-ins. These tools are available on the internet and will allow learners to modify existing animations or create their own.

3D animation software teaching is best done in short, carefully structured stages, each stage being reinforced with small practical projects which, when completed, allow progress to other stages.

Learners must complete a 3D animation to a brief that could be specified by a client or be a simulated assignment. This will develop the knowledge, skills and techniques associated with industry-standard 3D animation software.

Reflective practice is an important part of development and design. Learners should be encouraged to compare their completed 3D animations with their original intentions and with current and past professional work.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to concepts and principles of 3D. Learners will receive lectures and demonstrations, and hold discussions to: <ul style="list-style-type: none">• examine how 3D is used by the interactive media and computer games industry• explain how 3D animations are displayed• explain how 3D models are constructed• examine the types of development software used in the production of 3D animations.
Assignment 1 – 3D: The Basics. Learners write an article entitled '3D: the basics' for an online 3D art ezine, examining the application and use of 3D models within interactive media and computer game products. The article must cover: <ul style="list-style-type: none">• applications of 3D• displaying 3D polygon animations• geometric theory• mesh construction• 3D development software• constraints.
Introduction to and review of ideas generation and recording.

Topics and suggested assignments and activities

Assignment 2 – 3D Animated Sequence.

Stage 1

Learners will generate ideas and specification documentation for a 3D animation to match a brief from the college management to provide an animated sequence for an interactive CD to promote the college.

Learners will:

- consider and interpret the brief
- generate and record ideas
- select and develop one idea
- carry out pre-production planning for that idea
- compile a comprehensive development log evidencing their creative work.

Workshop sessions on development of practical skills to create 3D animations by:

- formal brief introductory lecture at commencement of sessions covering skills to be developed in session and covering
 - basic software interface tools
 - advanced software interface tools
 - animation production processes
- reviewing own 3D animation production work.

Assignment 2

Stage 2

Learners will create the 3D animation from the idea developed in part 1 of this assignment.

Learners will:

- undertake production following their planned ideas
- present 3D animation production work
- review their own 3D animation production work.

Unit learning and assessment review.

Assessment

Evidence for assessment

As evidence of the achievement of learning outcome 1 the learner can present researched information. This could be via a presentation or a report explaining the applications of 3D, geometric theory, mesh construction, 3D development software and constraints. Research could include extracts from books, journals, articles, material published on the internet or trade publications. Evidence relating to learning outcome 1 might also be presented in the form of wiki articles.

For learning outcomes 2 and 3, learners must produce documentation showing ideas generation, an outline specification, and a 3D animation using 3D application software. Documentation could be presented as annotated screen grabs or via screen capture software with voiceover.

Presentations must be recorded for the purposes of internal and external verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe the use of 3D within the interactive media industry and how 3D graphics are displayed, including reference to geometric theory and mesh construction, though the evidence will typically not discuss displaying 3D polygon environments. The description will not be related through examples to particular 3D applications. Descriptions of geometric theory and mesh construction will be correct and should cover the main points. A learner might note when discussing geometric theory, 'Points are the most basic part of every 3D object. The joining of points creates lines, which in turn can then be made into polygons. Points are used to identify a place or location in 3D space. Once you have your points, you can now connect them to make a line.' Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will indicate some consideration of brief or target audience, though this is likely to be a cursory statement of fact, without discussion of implications. Evidence will show some recording of ideas generation outlining their ideas through brainstorming sheets, sketches, storyboards or otherwise, though they will not justify choice of final ideas for implementation. There will be some imagination behind the ideas and some attempt will have been made to explain intentions but this will be patchy and not always clear. They will have constructed a brief specification which will outline the idea and will give some indication of what will be required to produce the animation. They will also show that they have taken account to some extent of legal and ethical considerations, though this evidence is likely to be minimal and factual only, lacking consideration of implications for the final animation.

3.1: learners will have produced a 3D animation of between 500 and 600 frames from ideas generated from their interpretation of the brief. The learner's use of the 3D animation software to produce their 3D animation will be basic, typically using layers and object naming conventions, animation tools (such as move, stretch, rotate pivot points), linking and using chains, animating with key frames, using ambient, distant, area and spot lighting types, adding a target virtual camera and applying basic textures to objects, and using basic animation rendering techniques. Learners will provide documentation on their use of the 3D application software tools and features used to produce their 3D animation but it will be scanty and lacking in detail. Following industry practice, learners will be able to review their finished 3D animation work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification. They will discuss both production process and finished product comparing it with their original intentions, making comments on fitness for purpose, technical qualities, aesthetic qualities, production skills, ideas generation, workflow and time management, technical competence and teamwork and commenting on how they have used 3D development software to create a solution to the brief. The learner might note for example, 'For my animation I based it on a planet in outer space. I animated my spaceship model by using key frame animation tools to make the ship move from the launch pad and disappear into outer space. I had a problem with my camera behind the spaceship looking down at the planet surface; you could see the square-shaped plane I had used for the landscape with the space station sitting on it. It looked really awful.'

2.1 and 3.1: in terms of the imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners will require assistance from tutors to prepare and produce their 3D animation ideas. If they have been in frequent need of such help but fail to make use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – 3D: The Basics	Article on 3D modelling for an online 3D art ezine.	<ul style="list-style-type: none"> All preparatory notes. Report document as word-processed or electronic presentation.
2.1	Assignment 2 – 3D Animated Sequence for an Interactive CD to Promote the College Stage 1	Brief from learner’s college to create 3D animated sequence for an interactive CD to promote the college.	Development log containing: <ul style="list-style-type: none"> all ideas notes, sketches, concept drawings, storyboard proposal outline animation sequence specification.
3.1	Assignment 2 Stage 2	As above.	Project portfolio containing: <ul style="list-style-type: none"> planning notes all production documentation 3D animated sequence personal reflective comment.

Essential resources

For this unit learners must have access to 3D development software such as 3D Studio Max, Maya, Lightwave, AutoCAD Cinema 4D or Softimage|XSI and internet access to download plug-ins.

Indicative resource materials

Textbooks

- Ahearn L — *3D Game Textures: Create Professional Game Art Using Photoshop* (Focal Press, 2006) 978-0240807683
- Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725
- Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371
- Birm J — *Digital Lighting and Rendering* (New Riders, 2006) 978-0321316318
- Brooker D — *Essential CG Lighting Techniques with 3Ds Max* (Focal Press, 2008) 978-0240521176
- Capizzi T — *Inspired 3D Modelling and Texture Mapping* (Premier Press, 2002) 978-1931841504
- Franson D — *2D Artwork and 3D Modelling for Game Artists* (Prima Tech, 2002) 978-1931841337
- Gahan A — *3ds Max Modeling for Games: Insider's Guide to Game Character, Vehicle, and Environment Modeling* (Focal Press, 2008) 978-0240810614
- Giambruno M — *3D Graphics and Animation* (New Riders, 2004) 978-1405814720
- Summers D — *Texturing: Concepts and Techniques* (Charles River Media, 2004) 978-1584503002
- Weishar P — *Moving Pixels: Blockbuster Animation, Digital Art and 3D Modelling Today* (Thames & Hudson, 2004) 978-0500512081

Journals

3D World

Websites

- www.3dcafe.com — texture and model resources
- www.3dworldmag.com — textures, models and 3D tutorials
- www.blinkimage.com — use of environment walkthroughs etc
- www.turbosquid.com — textures, models and 3D tutorials

Unit 9: 3D Environments

Unit code: A/600/6599

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to the theory and use of 3D environment software. Learners will develop an awareness of how 3D environments are displayed on a computer screen and investigate the geometric theory underlying 3D environment work. Learners will devise and create a 3D environment scene and reflect critically on their own work.

Unit introduction

3D environment artists create 3D environments for architectural walk-throughs, TV programmes, films, websites and games. The scenery created by these artists includes, for instance, buildings, vegetation and furniture, produced by computers running 3D application software. 3D environment artists are responsible for applying textures to objects and environment items such as the surfaces of walls and floors of buildings. This is a highly-skilled area of work which requires considerable knowledge and understanding of lighting, perspective, materials, colour theory and visual effects. Specialist software packages are used to create the environments and artists must portray the environments as realistically as possible, in an efficient and effective way which makes best use of the technology.

In this unit learners will have the opportunity to use a 3D software application to produce a 3D scene of an environment. This is a complex process and learners are encouraged to research concepts and use of 3D environments within the interactive media industry. Learners will develop an awareness of how rendered 3D environments are displayed on a computer screen. An appreciation of the geometric theory underlying 3D work will help learners understand the technical language used by environment artists.

Through study of this unit, learners will develop practical computer skills that will enable them to create original 3D environments using a range of techniques, including lighting, texturing and rendering.

Learners following this unit will have an opportunity to devise and develop original ideas from interpreting creative briefs for potential target audiences. Learners will develop preparation skills such as drafting pre-visualisation sketches and storyboards.

This unit will develop the learners' ability to reflect critically on their own work, as they will need this professional skill in any future career. Planning and self-evaluation are also professional skills and developing them will form a habit of preparation and workflow management of value to any entrant to the interactive media industry.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand theory and applications of 3D	1.1	summarise accurately theory and applications of 3D with some appropriate use of subject terminology
2	Be able to devise a 3D environment	2.1	generate outline ideas for a 3D environment working within appropriate conventions and with some assistance
3	Be able to create a 3D environment following industry practice.	3.1	create a 3D environment following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand theory and applications of 3D

Applications of 3D: uses, eg environments, models, product design, TV, film, web, games, education, architectural walk-through

Displaying 3D polygon environments: application programming interface, eg Direct3D, OpenGL; graphics pipeline, eg modelling, lighting, viewing, projection, clipping, scan conversion, texturing and shading, display; rendering techniques (radiosity, ray tracing); rendering engines; distributed rendering techniques; lighting; textures; fogging; shadowing; vertex and pixel shaders; level of detail

Geometric theory: vertices; lines; curves; edge; polygons; element; face; primitives; meshes, eg wireframe; coordinate geometry (two-dimensional, three-dimensional); surfaces

Mesh construction: box modelling; extrusion modelling; using common primitives, eg cubes, pyramids, cylinders, spheres

3D development software: software, eg 3D Studio Max, Maya, Lightwave, AutoCAD, Cinema 4D, Softimage|XSI; file formats, eg .3ds, .mb, .lwo, .C4d, .dxf, .obj; plug-ins

Constraints: polygon count; file size; rendering time

2 Be able to devise a 3D environment

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; sketches; pre-visualisation (concept drawings, storyboards, level diagrams, 2D/3D architectural drawings)

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, representation (race, gender, religion, sexuality), decency

Specification: target audience; key visual themes; storyboards; constraints, eg polygon count, image resolution, output size, file type, file size

3 Be able to create a 3D environment following industry practice

Plan: asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Software interface: files, eg loading, properties, merging, replacing, importing, saving, backup and auto-saving; viewports, eg configuring viewports, viewport controls; command panels; keyboard shortcuts; floating palettes; customising the interface; floating toolbars; drawing units; drawing aids (layers, grids, snap); object naming conventions

Virtual camera: concepts, eg lens length, field of vision (FOV), focus and aperture, depth of field, camera movement; cameras, eg creating a camera, creating a camera view; camera parameters; camera type, eg target, free

Lighting techniques: light types, eg ambient, distant, area, spot, point, linear, photometric, raytraced; lighting controls and effects, eg projector, attenuation, colour, shadows; atmospheric, eg clouds, smoke, fire; volumetric, eg fog, mist

Texturing techniques: texturing process, eg creating, loading textures, applying textures; using materials, eg materials editor, mapping materials, material modifiers; material types, eg bitmap, procedural, using avi video files as textures

Rendering: scene rendering, eg rendering controls, rendering options, output size and aspect ratio, safe-frame, file type, file size; image resolution, eg TV, film, web

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, environment specification, workflow and time management, technical competence, teamwork)

Delivery

It is suggested that teaching follows the order of the learning outcomes, addressing the concepts and principles of 3D initially, followed by generating ideas and planning 3D environments, production of original 3D environment, and finally reflecting upon own 3D environment work.

This unit could be taught through a variety of activities, such as lectures, group discussions, practical sessions and demonstrations. The largest proportion of time should be spent in practical sessions using 3D application software.

Formal lectures and independent study will be the main methods used to teach understanding of concepts and principles of 3D. Learners could research a range of contemporary 3D environment work and investigate how professional 3D environment artists incorporate their work into a range of multimedia applications.

Learners will need to appreciate the application of 3D and the principles of 3D geometric theory, mesh construction and the developments of 3D software. They will therefore need to understand the features of 3D application software and the techniques and methods used in the development of 3D environments. This can be achieved through formal lectures, independent study or through the practical use of 3D software to create 3D scenes. Learners will also need access to a range of 3D design tools and plug-ins. These tools are available on the internet and will allow learners to modify existing 3D environment scenes or create their own.

Teaching of 3D application software is best done in short, carefully structured stages, each stage being reinforced with small practical projects which, when completed, allow progress to other stages.

Learners must produce a 3D environment to a brief that could be specified by a client or be a simulated assignment. This will develop knowledge, skills and techniques associated with industry-standard 3D software to produce realistic environments.

Reflective practice is an important part of development and design. Learners should be encouraged to compare their completed 3D environments with their original intentions and with current and past professional work.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
<p>Introduction to concepts and principles of 3D.</p> <p>Learners will receive lectures and demonstrations, and hold discussions to:</p> <ul style="list-style-type: none">• examine how 3D is used by the interactive media and computer games industry• explain how 3D environments are displayed• explain how 3D environments are constructed• examine the types of development software used in the production of 3D environments.
<p>Assignment 1 – 3D: The Basics.</p> <p>Learners write an article entitled '3D: the basics' for an online 3D art ezine, examining the application and use of 3D models within interactive media and computer game products.</p> <p>The article must cover:</p> <ul style="list-style-type: none">• applications of 3D• displaying 3D polygon animations• geometric theory• mesh construction• 3D development software• constraints.
Introduction to and review of ideas generation and recording.
<p>Assignment 2 – Ideas Generation.</p> <p>Brief is to generate ideas and specification documentation for a 3D environment for an architectural walk-through of a building.</p> <p>Learners will work individually to:</p> <ul style="list-style-type: none">• consider and interpret the creative brief• generate and record ideas• carry out pre-production planning• compile a comprehensive development log evidencing their creative work.

Topics and suggested assignments and activities

Workshop sessions on development of practical skills to create 3D environments. Each session to have brief formal introductory lecture covering skills to be developed in session. Workshops will cover:

- basic software interface tools
- advanced software interface tools
- environment production processes
- reviewing own 3D environment production work.

Assignment 3 – Production.

Following on from the work for Assignment 2, learners will create the 3D environment they have planned.

Learners will:

- undertake production workshop sessions following their planned ideas
- present 3D environment production work
- review their own 3D environment production work.

Unit learning and assessment review.

Assessment

Evidence for assessment

For assessment of the achievement of learning outcome 1 the learner can present researched information. This could be via a presentation or a report explaining the applications of 3D, geometric theory, mesh construction, 3D development software and constraints. Research could include extracts from books, journals, articles, material published on the internet or trade publications. Evidence relating to learning outcome 1 might also be presented in the form of wiki articles.

For learning outcomes 2 and 3 learners must work to a given brief to produce documentation showing ideas generation and planning, and a 3D scene of an environment using 3D application software. Documentation could be presented as annotated screen grabs or via screen capture software with voiceover.

Presentations must be recorded for the purposes of internal and external verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe the use of 3D within the interactive media industry and how 3D graphics are displayed; including reference to geometric theory and mesh construction, though the evidence will typically not discuss displaying 3D polygon environments. The description will not be related through examples to particular 3D applications. Descriptions of geometric theory and mesh construction will be correct and should cover the main points. A learner might note when discussing geometric theory, 'Points are the most basic part of every 3D object. The joining of points creates lines, which in turn can then be made into polygons. Points are used to identify a place or location in 3D space. Once you have your points, you can connect them to make a line.' Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will indicate some consideration of brief or target audience, though this is likely to be a cursory statement of fact, without discussion of implications. Evidence will show some recording of ideas generation outlining their ideas through brainstorming sheets, sketches, storyboards or otherwise, though they will not justify choice of final ideas for implementation. There will be some imagination behind the ideas and some attempt will have been made to explain intentions but this will be patchy and not always clear. They will have constructed a brief specification which will outline the idea and will give some indication of what will be required to create the 3D environment scene. They will also show that they have taken account to some extent of legal and ethical considerations though this evidence is likely to be minimal and factual only, lacking consideration of implications for the final 3D environment scene.

3.1: learners will have produced a 3D environment scene from ideas generated from their interpretation of the brief. The learner's use of the 3D application software to produce their 3D environment scene will be basic, typically using ambient, distant, area and spot lighting types, adding a target virtual camera, applying basic textures to objects and basic scene rendering techniques. Learners will provide documentation on their use of the 3D application software tools and features used to produce their 3D environment scene but it will be scanty and lacking in detail. Following industry practice, learners will be able to review their finished 3D environment work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification. They will discuss both the production process and the finished product, making comments on generation of ideas, planning their 3D environment, its fitness for purpose (considering client brief where relevant and target audience) and commenting on how they have used 3D development software to create a solution to the brief. Learners will make surface comments that do not address opportunities for future improvement. Some use of suitable and correct terminology must be evidenced. The learner might note, 'I based my scene on a planet in outer space. I created a basic space station by using some basic primitives, eg boxes, cylinders and stairs to make a landing platform. I found metal textures on the internet and put them onto the buildings I made. I then exported it and began working on the terrain for the planet's surface. I had a problem when I wanted to put a camera angle behind the spaceships looking down at the surface of the planet; however, you could see the square-shaped plane with the space station sitting on it. It looked really awful.'

2.1 and 3.1: in terms of the imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners will have required frequent assistance and support from tutors to prepare and create their 3D environment ideas. If they have been in frequent need of such help but fail to make use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – 3D: The Basics	Article on 3D modelling for an online 3D art ezine.	<ul style="list-style-type: none"> All preparatory notes. Report document as word-processed or electronic presentation.
2.1	Assignment 2 – Ideas Generation	Brief from client to create a 3D environment for an architectural walk-through of a new building.	Development log containing: <ul style="list-style-type: none"> all ideas notes, sketches, concept drawings, storyboards proposal outline environment specification.
3.1	Assignment 3 – Production	As above.	Project portfolio containing: <ul style="list-style-type: none"> planning notes all production documentation 3D environment personal reflective commentary.

Essential resources

For this unit learners must have access to 3D development software such as 3D Studio Max, Maya, Lightwave, AutoCAD Cinema 4D or Softimage|XSI, and internet access to download plug-ins.

Indicative resource materials

Textbooks

Ahearn L — *3D Game Textures: Create Professional Game Art Using Photoshop* (Focal Press, 2006) 978-0240807683

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Birm J — *Digital Lighting and Rendering* (New Riders, 2006) 978-0321316318

Brooker D — *Essential CG Lighting Techniques with 3Ds Max* (Focal Press, 2008) 978-0240521176

Capizzi T — *Inspired 3D Modelling and Texture Mapping* (Premier Press, 2002) 978-1931841504

Gahan A — *3ds Max Modelling for Games: Insider's Guide to Game Character, Vehicle, and Environment Modelling* (Focal Press, 2008) 978-0240810614

Summers D — *Texturing: Concepts and Techniques* (Charles River Media, 2004) 978-1584503002

Journals

3D World

Develop Magazine

Edge Magazine

MCV Magazine

Websites

www.3dcafe.com — texture and model resources

www.blinkimage.com — use of environment walk-throughs etc

www.turbosquid.com — textures, models and 3D tutorials

Unit 10: 3D Modelling

Unit code: K/600/6601

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to the theory and use of 3D modelling software. Learners will develop an awareness of how 3D models are displayed on a computer screen and investigate the geometric theory underlying 3D modelling work. Learners will devise and create 3D models and reflect critically on their own work.

Unit introduction

3D modelling is the art of creating characters and objects for 3D models, including life forms, scenery, vegetation, furniture, and vehicles. It is created by means of 3D computer application software. 3D modellers are sometimes also responsible for applying textures to objects, characters, models and items, such as the surfaces of walls and floors of buildings. This is highly skilled work which requires considerable knowledge of lighting, perspective, materials, and visual effects. Specialist software packages are used to create the models and modellers must portray the models as realistically as possible in an efficient and effective way, making the most appropriate use of the technology.

In this unit learners will have the opportunity to use a 3D modelling software application to produce 3D models for a scene. 3D modelling concepts are complex and in this unit learners are encouraged to research the use of 3D modelling within the interactive media industry. Learners will develop an awareness of how rendered 3D models are displayed on a computer screen. An appreciation of the geometric theory underlying 3D work will help learners understand the technical language used by modellers.

Learners following this unit will have the opportunity to devise and develop original ideas through interpreting creative briefs and considering potential target audiences. They will develop skills in drafting pre-visualisation sketches and storyboards. Developing these planning skills will form a habit of preparation and workflow management of value to any entrant to the interactive media industry.

Learners will develop practical computer modelling skills and will create 3D models using a range of techniques, including box and extrusion modelling and rendering.

This unit will also develop the learners' ability to reflect critically on their own work, as they will need this professional skill in any future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand theory and applications of 3D	1.1	summarise accurately theory and applications of 3D with some appropriate use of subject terminology
2	Be able to devise 3D models	2.1	generate outline ideas for 3D models working within appropriate conventions and with some assistance
3	Be able to create 3D models following industry practice.	3.1	create 3D models following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand theory and applications of 3D

Applications of 3D: uses, eg models, product design, animations, TV, film, web, games, education, architectural walk-through

Displaying 3D polygon animations: application programming interface, eg Direct3D, OpenGL; graphics pipeline, eg modelling, lighting, viewing, projection, clipping, scan conversion, texturing and shading, display; rendering techniques (radiosity, ray tracing); rendering engines; distributed rendering techniques; lighting; textures; fogging; shadowing; vertex and pixel shaders; level of detail

Geometric theory: vertices; lines; curves; edge; polygons; element; face; primitives; meshes, eg wireframe; coordinate geometry (two-dimensional, three-dimensional); surfaces

Mesh construction: box modelling; extrusion modelling; using common primitives, eg cubes, pyramids, cylinders, spheres

3D development software: software, eg 3D Studio Max, Maya, Lightwave, AutoCAD, Cinema 4D, Softimage|XSI; file formats, eg .3ds, .mb, .lwo, .C4d, .dxf, .obj; plug-ins

Constraints: polygon count; file size; rendering time

2 Be able to devise 3D models

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; sketches; pre-visualisation (concept drawings, storyboards, level diagrams, 2D/3D architectural drawings)

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, representation (race, gender, religion, sexuality), decency

Specification: target audience; key visual themes; storyboards; constraints, eg polygon count, image resolution, output size, file type, file size

3 Be able to create 3D models following industry practice

Development software interface: files, eg loading, properties, merging, replacing, importing, saving; viewports, eg configuring viewports, viewport controls; command panels; keyboard shortcuts; floating palettes; customising the interface; floating toolbars; drawing units; drawing aids (layers, grids, snap); object naming conventions

Geometric models and text: models, eg box, tube, plane, sphere, disc, cone, cylinder, pyramid; 3D text

Mesh building and editing: vertices (adding, editing, deleting); polygons, eg planar, non-planar

Modelling: layers; modify (move, rotate, stretch, deform); extend (bevel, extrude, lathe); combine (Boolean, Patch); duplicate (mirror, array, clone); organic modelling, eg subdivision surfaces, weight maps, level of detail; nurbs, eg relational modelling, curves, control vertices, UV coordinates, surfaces, extrudes, sweeps, skinning, trims, fillets, surface approximation

Virtual camera: concepts, eg lens length, field of vision (FOV), focus and aperture, depth of field; cameras, eg creating a camera, creating a camera view; camera parameters; camera type, eg target, free; conversion from real world equivalents (especially in light of digital photography and use of smaller sensors)

Lighting: light types (ambient, distant, area, spot, point, linear, photometric, raytraced); lighting controls and effects, eg projector; attenuation; colour; shadows; atmospheric, eg clouds, smoke, fire; volumetric, eg fog, mist

Texturing: creating textures; loading; applying textures to objects; material editor; mapping materials; material modifiers; material types, eg bitmap, procedural

Rendering: scene rendering, eg rendering controls, rendering options, output size and aspect ratio, safe-frame, file type, file size; image resolution, eg TV, film, web, desktop, image formats, compression

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, modelling specification, workflow and time management, technical competence, teamwork)

Delivery

It is suggested that teaching follow the order of the learning outcomes, addressing the concepts and principles of 3D initially, followed by generating ideas and planning 3D models, the production of original 3D models, and finally reflecting upon own 3D modelling work.

This unit could be taught through a variety of activities during the teaching sessions using lectures, discussions, practical sessions and demonstrations. The largest proportion of time should be spent in practical sessions using 3D modelling application software.

Formal lectures and independent study will be the main methods used to teach understanding of concepts and principles of 3D. Learners could research a range of contemporary 3D modelling work and investigate how professional 3D modelling artists incorporate their work into a range of multimedia applications.

Learners will need to appreciate the application of 3D and the principles of 3D geometric theory, mesh construction and the developments of 3D software. They will, therefore, need to understand the features of 3D application software and the techniques and methods used in the development of 3D models. This can be achieved through formal lectures, independent study or through the practical use of 3D software to create 3D models. Learners will also need access to a range of 3D design tools and plug-ins. These tools are available on the internet and will allow learners to modify existing 3D models or create their own.

Teaching of 3D application software is best done in short, carefully structured stages, each stage being reinforced with small practical projects which, when completed, allow progress to other stages. Learners must produce 3D models to a brief that might be specified by a client or in a simulated assignment thus developing knowledge, skills and techniques associated with industry-standard 3D software to produce realistic models.

Reflective practice is an important part of development and design. Learners should be encouraged to compare their completed 3D models with their original intentions and with current and past professional work.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to concepts and principles of 3D. Learners will receive lectures and demonstrations, and hold discussions to: <ul style="list-style-type: none">• examine how 3D is used by the interactive media and computer games industry• explain how 3D models are displayed• explain how 3D models are constructed• examine the types of development software used in the production of 3D models.
Assignment 1 – 3D: The Basics. Learners write an article entitled '3D: the basics' for an online 3D art ezine, examining the application and use of 3D models within interactive media and computer game products. The article must cover: <ul style="list-style-type: none">• applications of 3D• displaying 3D polygon animations• geometric theory• mesh construction• 3D development software• constraints.
Introduction/review of ideas generation and recording.
Assignment 2 – 3D Models for an Asset Library. Learners will generate ideas and specification documentation for 3D models to match a brief. Learners will: <ul style="list-style-type: none">• consider and interpret the creative brief• generate and record ideas• carry out pre-production planning• compile a comprehensive development log evidencing their creative work.

Topics and suggested assignments and activities

Workshop sessions on development of practical skills to create 3D models.

Formal brief introductory lecture at commencement of sessions covering skills to be developed in session and covering:

- basic software interface tools
- advanced software interface tools
- models production processes
- reviewing own 3D models production work.

Assignment 3 – 3D Models for an Architectural Walk-through of a Building.

Learners will create 3D models of a building for an architectural walk-through in response to a brief.

Learners will:

- undertake production workshop sessions following their planned ideas
- present 3D modelling production work
- review their own 3D models and production work.

Unit learning and assessment review.

Assessment

Evidence for assessment

For assessment of the achievement of learning outcome 1 the learner can present researched information. This could be via a presentation or a report explaining the applications of 3D, geometric theory, mesh construction, 3D development software and constraints. Research could include extracts from books, journals, articles, material published on the internet or trade publications. Evidence relating to learning outcome 1 might also be presented in the form of wiki articles.

As evidence of achievement of learning outcomes 2 and 3, learners must produce documentation showing ideas generation, planning and review of each 3D model using 3D application software. Documentation could be presented as annotated screen grabs or via screen capture software with voiceover.

Presentations must be recorded for the purposes of internal and external verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe the use of 3D within the interactive media industry and how 3D graphics are displayed including reference to geometric theory and mesh construction, though at this level the evidence will typically not discuss displaying 3D polygon models. The description will not be related through examples to particular 3D applications. Descriptions of geometric theory and mesh construction will be correct and should cover the main points. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it. A learner might note when discussing geometric theory, 'Points are the most basic part of every 3D object. The joining of points creates lines, which in turn can then be made into polygons. Points are used to identify a place or location in 3D space. Once you have your points, you can now connect them to make a line.'

2.1: learners will indicate some consideration of brief or target audience, though this is likely to be a cursory statement of fact, without discussion of implications. Evidence will show some recording of ideas generation outlining their ideas through brainstorming sheets, sketches, storyboards or otherwise, though at this level they will not justify choice of final ideas for implementation. There will be some imagination behind the ideas and some attempt will have been made to explain intentions but this will be patchy and not always clear. They will have constructed a brief specification which will outline the idea, and will give some indication of what will be required to produce the models. They will also show that they have taken account to some extent of legal and ethical considerations though this evidence is likely to be minimal and factual only, lacking consideration of implications for the final models.

3.1: learners will have produced an asset library of related 3D models using 3D application software. It is expected at this level that the learner will have produced a minimum of six models from ideas generated in response to the brief. At this level the learner's use of the 3D application software to produce their 3D models will be basic – for example, box and extrusion modelling using standard primitives such as box, tube, plane, sphere, disc, cone, cylinder; using ambient, distant, area, and spot lighting types; adding a target virtual camera; applying basic textures to objects and basic rendering techniques. Learners will provide documentation on their use of the 3D application software tools and features used to produce their 3D models but it will be scanty and lacking in detail. Following industry practice, learners will be able to review their finished 3D modelling work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification. They will discuss both the production process and the finished product, making comments on generation of ideas, planning their 3D models, their fitness for purpose (considering client brief where relevant and target audience) and commenting on how they have used 3D development software to create a solution to the brief. A learner will make surface comments that do not address opportunities for future improvement. The learner might note, 'I based my models on my brief which was to design models for a space station scene on a mysterious planet in deep space. I created several models for the space station using my development sketches as a guide. I used some basic primitives to construct my models, eg boxes and cylinders to make a spaceship. I found metal textures on the internet and applied them to the spaceship model. I had a problem with my lighting and my camera angles, the finished rendered models looked really poor.'

2.1 and 3.1: in terms of the imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners will require frequent assistance and support from tutors to prepare and produce their 3D modelling ideas, though they will take note of and make use of this help when given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – 3D: The Basics	Article on 3D modelling for an online 3D art ezine.	<ul style="list-style-type: none"> • All preparatory notes. • Report document as word-processed or electronic presentation.
2.1	Assignment 2 – 3D Models for an Asset Library	Brief from client to create 3D models for an asset library.	Development log containing: <ul style="list-style-type: none"> • all ideas notes, sketches, concept drawings, storyboards • asset library of models.
3.1	Assignment 3 – 3D Models for an Architectural Walk-through of a Building	Brief from client to create 3D models for an architectural walk-through of a building.	Project portfolio containing: <ul style="list-style-type: none"> • planning notes • all production documentation • proposal outline • modelling specifications • personal reflective comment.

Essential resources

For this unit learners must have access to 3D development software such as 3D Studio Max, Maya, Lightwave, AutoCAD Cinema 4D or Softimage|XSI, and internet access to download plug-ins.

Indicative resource materials

Textbooks

Ahearn L — *3D Game Textures: Create Professional Game Art Using Photoshop* (Focal Press, 2006) 978-0240807683

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Birm J — *Digital Lighting and Rendering* (New Riders, 2006) **978-0321316318**

Brooker D — *Essential CG Lighting Techniques with 3Ds Max* (Focal Press, 2008) 978-0240521176

Capizzi T — *Inspired 3D Modelling and Texture Mapping* (Premier Press, 2002) 978-1931841504

Gahan A — *3ds Max Modelling for Games: Insider's Guide to Game Character, Vehicle, and Environment Modelling* (Focal Press, 2008) 978-0240810614

Summers D — *Texturing: Concepts and Techniques* (Charles River Media, 2004) 978-1584503002

Journals

3D World

Develop Magazine

Edge Magazine

MCV Magazine

Websites

www.3dcafe.com — texture and model resources

www.blinkimage.com — use of environment walk-throughs etc

www.turbosquid.com — textures, models and 3D tutorials

Unit 11: Advertisement Production for Television

Unit code: M/600/6602

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to enable learners to apply production skills to create an advert for television. Learners will examine existing television advertisements to investigate how persuasive messages can be constructed. They will then plan and produce an advertisement for television, and evaluate the effectiveness of their finished product.

Unit introduction

Advertising is all around us and is integral to everyday life. It is one of the largest sectors of the media industry, adverts being presented in a wide range of media, such as television, film, radio, magazines, posters, billboards, the press, and the internet. Of all of these, television advertising probably has the highest profile, some television advertisements being so effective and memorable that they become classics and part of the cultural background for a whole generation of viewers. Television is used to market almost every product one can imagine from everyday consumables like washing powder to extravagant sports cars, whilst some advertisements promote a service such as insurance, banking or vehicle breakdown cover.

Television advertising has become more and more sophisticated, utilising the very latest digital production techniques. Content and style can be simple or complex, using traditional narrative structures or less obvious surrealist imagery, and messages can be overt or understated. There seems to be no single approach which can be said to be more effective than another.

This unit starts by considering how advertisements are structured, how they try to work and how persuasive messages can be constructed. Understanding these things will create a firm basis on which to plan the production of advertisements for television as well as enabling learners to become more discerning consumers.

Through research and analysis, learners will examine advertising production and explore the relationship between audience, medium and message. Advertisers invariably aim at a highly specified target audience which, it is

hoped, will associate with a particular brand and so choose to buy it. An understanding of how those audiences are thought about and how they are found is therefore essential.

Learners will develop practical production skills and learn how to plan, produce and monitor production through to a completed advert for television. The unit therefore offers an opportunity for learners to engage in activities which are integral to other forms of media production and hence gain skills and knowledge which are highly transferable. Finally, they will evaluate the effectiveness of the finished product.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know about the structures and techniques of television advertisements	1.1 describe structures and techniques of television advertisements with some appropriate use of subject terminology
2 Be able to originate and develop an idea for a television advertisement	2.1 originate and develop an idea for a television advertisement working within appropriate conventions and with some assistance
3 Be able to produce a television advertisement	3.1 produce a television advertisement working within appropriate conventions and with some assistance
4 Be able to reflect upon own a television advertisement production work.	4.1 comment on own television advertisement production work with some appropriate use of subject terminology.

Unit content

1 Know about the structures and techniques of television advertisements

Structures: form, eg realist narrative, anti-realist narrative, animation, documentary, talking heads, stand-alone, series; style, eg humorous, surreal, dramatic, parodic; codes and conventions (camera angle, shot, iconography, editing, lighting, sound, music); computer graphics; special effects (SFX)

Techniques: hidden and overt messages; emotional responses or association, eg solution to a problem, fear, concern, compassion, self-perception, social position; celebrity endorsement

Characteristics of products or services: benefits offered; advantages over other similar products; unique selling proposition (USP); life style appeal; brand identity

Regulation: Advertising Standards Authority (ASA); Ofcom

Audience information: audience measurement panels; ratings; face-to-face interviews; focus groups; questionnaires; programme profiles; Broadcasters' Audience Research Board (BARB); television research agencies

Sources of information: rates cards; advertisers' information packs; research agency websites

Audience classification: Standard Occupational Classification; psychographics; geodemographics; by age; by gender

2 Be able to originate and develop an idea for a television advertisement

Research for production: brief; client; budget; deadline; technical resources; technical constraints; identification of target audience, eg quantitative, qualitative, focus groups; conditions of reception; market research data; legal and ethical issues, eg codes of practice, regulatory framework

Ideas: ideas generation eg mind-mapping, group discussion, past and current practice; recording ideas eg notes, sketches; initial plans and proposals; identification of message; content; style; relevance to audience

3 Be able to produce a television advertisement

Pre-production: synopsis; script; storyboards; production schedule; location plans; shooting script; risk assessment; crew; actors

Production: technology, eg cameras, tapes, tripods, microphones, lights; shooting; lighting; sound recording; health and safety

Post-production: technology, eg edit suites, mixing desks; tape logging; edit decision lists; editing; audio mixing

4 Be able to reflect upon own a television advertisement production work

Sources of information: self-evaluation; documentation, eg notes, sketches, story boards, thumbnails, mood boards, trial layouts, production logs; comments from others, eg audience, peers, tutors, client

Finished product: fitness for purpose; clarity of communication; appropriateness to audience; compared with original intentions; effectiveness of techniques; effectiveness of content; impact of work; technical qualities; aesthetic qualities

Delivery

This unit builds on other production and pre-production units and, therefore, the practical element can be based on pre-existing technical skills (knowledge of techniques and technology). In order to express their intentions successfully learners will need to be able to use technology effectively.

Whilst it is conventional for learners to work within a small production group to produce an advert, an important consideration for this unit is that each learner must be encouraged to generate their own work where possible. This will enable them to demonstrate a personal understanding and engagement in the production process, even if they have worked together as a small production team.

The unit also provides an opportunity to develop further understanding of the ways in which media messages are constructed to meet the needs of a particular client and with a particular audience in mind and offers further opportunities to investigate the wider context within which the media industry operates. Tutors will need to ensure that learners have an understanding of how these processes, economic factors and regulatory structures impinge on the production of a television advertisement. Once the background knowledge and understanding have been established, the unit can be taught largely in the context of practical production.

The first stage of the unit can be taught through a series of formal sessions where learners are encouraged to examine a range of individual television advertisements. Initially it would be beneficial for the group to discuss with each other, within the class, what they can recall about television adverts that may have had an impact on them, and to start to unravel why certain adverts are more memorable and effective than others. This learning can be reinforced with self-directed studies to investigate television advertising through libraries and the internet but a good range of practical examples should be available to view within the sessions.

Attitudes to advertising can be discussed, with tutors exploring individual learner and group perceptions and susceptibility to adverts, using the class as a focus group. It would be helpful at this stage if the tutor referred to up-to-date information on the effects of television advertising and sales.

Regulatory control has undoubtedly helped shape the style and content of advertisements with codes of practice and regulatory bodies defining issues to consider during the planning and review stages of production. A number of case studies could be reviewed to generate debate, looking at issues such as the way in which children are targeted or the use of stereotyping. It is also interesting to note the differences between British adverts and those from other countries, or the way in which adverts for a particular product have changed over a period of time.

Learners should be encouraged to select peers, friends and family to take part in research of previous television adverts and audience perceptions, finding out about developments in content, style and technology. It is important for learners to understand that these investigations, whilst forming an important part of the evidence of understanding for this unit, will also help them to be able to contribute more effectively to their own advert.

Initial ideas creation can be a collaborative process and it is recommended that, where possible, a simulated client brief be used to clearly set out the requirements of the practical task. However, individual learners should always keep a file of their own production work and not be prevented from producing several initial proposals together with the associated research material. In this way all learners will be helped to understand the constraints applicable, experiencing the stages of production and working within regulatory controls. It would be advantageous when working to a brief for learners to be able to present their proposals to a notional client and respond appropriately to feedback.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction: <ul style="list-style-type: none"> • the role of television advertising and its products • television advertisements – existing television advertisements designed to address the audience and meet client needs.
Recap from previous specialist units: <ul style="list-style-type: none"> • the role of research within advertising production for television • the role of pre-production and risk assessment • pre-production types and applications.
Talk by a company marketing executive on the purpose and impact of television advertisements.
Talk by a production manager for a recent television advertisement on: <ul style="list-style-type: none"> • generating ideas for advertisements • legal and ethical considerations.

Topics and suggested assignments and activities

Exercise:

- learners work in pairs
- each pair is given 15 minutes to generate an idea for advertising a different product
- the products are swapped around and pairs have another 15 minutes to generate ideas for that product
- products are moved around until each pair has come up with an idea for each product
- pairs then present their ideas to the rest of the group.

Assignment 1 – What’s It For?

Individual or group presentations which describe the purpose and impact of advertising production for television (with examples).

Assignment 2 – Any Ideas?

Working in small creative teams learners:

- generate ideas by
 - mind-mapping around exploration of themes
 - researching issues and needs
 - legal, ethical considerations
- develop final ideas into proposal
- present final proposals to potential client group.

Assignment 3 – Get It Made.

Complete planning and pre-production work and apply pre-production techniques with consideration to:

- budget
- time
- personnel
- facilities
- locations
- clearances
- copyright (intellectual property)
- health and safety
- codes of practice and regulation.

Apply production techniques to create the product:

- gathering content and recording material
- editing, manipulating or arranging content
- post-production – finishing touches.

Topics and suggested assignments and activities

Feedback:

- present interim production work to client group – gain formative feedback
- respond to feedback – make adjustments.

Assignment 4 – Did It Work?

Learners will present final production work to client and audience focus group to gain summative feedback, and then write report evaluating own production project work.

Unit learning and assessment review.

Assessment

Evidence for assessment

Case study work, background research and a final production will form the basis of evidence for this unit. It is important that each individual learner develops a personal portfolio of evidence, particularly if group work is planned.

Achievement of learning outcomes 1 could be evidenced through a written report or a recorded presentation. A textual analysis linked to the declared purpose of a range of selected adverts could investigate production techniques, concepts and regulatory control. A written contextual analysis of current and past advertisements would provide evidence that learners have understood the background and context for production, eg advances in technology, and changes in the cultural awareness of consumers. Market research and audience sampling methods could be included and linked with the work in this section.

Tutors may wish to consider other forms of evidence where appropriate. Examples might be PowerPoint or animated presentations, audio recordings and video recorded presentations. Where appropriate, evidence can be supported by tutor observation checklists and witness statements though this form of evidence should not be overused.

For some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Evidence for achievement of learning outcome 2 will typically consist of a planning and research file which contains initial ideas and demonstrates the development of one of those ideas into a treatment. The treatment will form the basis of the final product.

Achievement of learning outcome 3 will be evidenced through the final product. However, where students are working in groups, the individual contribution of the learner needs to be clearly shown and supported by the learner's log (as well as any reflective accounts within evidence presented for learning outcome 4) along with tutor and peer observations. Where individual learners in a group disagree with decisions made by the rest of the group they can elucidate their own ideas and creative proposals within their production documentation.

Evidence for achievement of learning outcome 4 could be a formal written evaluation, or a presentation with illustrative extracts.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will refer to a range of different types of television advertisements in terms of the ways in which they are constructed and the techniques of persuasion they employ. The range may be limited or may not necessarily have expanded from any 'given' material. Learners may not have fully explored the relationship with how products are specifically targeted towards target markets or how audiences can react to different advertisements in different ways. Learners will outline audiences for advertisements simply but accurately using the appropriate categorisation systems, and will describe, or demonstrate through application, the means available for gathering information about audiences. Learners will give descriptive responses which are relevant, accurate and substantial, though not necessarily absolutely complete, and reference to the examples studied will be generalised, referring to whole advertisements rather than specific elements of those advertisements.

2.1: learners will have considered a limited range of ideas, for the production of television advertisements which may appear to have been reached through arbitrary approaches. They will have provided limited supporting material.

3.1: the technical quality of the finished advertisement will be acceptable and the advertisement will have shape and some sense of design. The activity that led to it will have been purposeful, with the deliberate application of chosen techniques.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the style of advertisement or the nature of the product being advertised. Learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

4.1: learners will consider their own work in such a way that they move beyond merely describing it. They will make evaluative comments about what they have done but these comments will be assertions that are not supported by evidence or exemplification. They will typically identify some technical flaws and make some reference to feedback from tutors, peers and client (if there is one), but will not fully appreciate the reasons why the techniques are not effective. Conclusions are likely to be simplistic.

1.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 - What's It For?	As members of a creative team learners investigate the impact of advertising for the type of product they will be advertising.	<ul style="list-style-type: none"> • PowerPoint slides, hand-outs and notes for presentation. • Recording of presentation. • Tutor observation notes.
2.1	Assignment 2 - Any Ideas?	Learners develop and produce a television advertisement working to a brief from a client.	<ul style="list-style-type: none"> • All ideas notes, sketches and drafts. • Research plan. • Research results. • Proposal. • Notes from presentation of proposal. • Tutor observation notes.
3.1	Assignment 3 - Get It Made	As above.	<ul style="list-style-type: none"> • All pre-production, production and post-production documentation. • Completed product. • Production log. • Tutor observation notes.
4.1	Assignment 4 - Did It Work?	As above.	<ul style="list-style-type: none"> • Notes from final presentation. • Tutor observation notes. • Learner report.

Essential resources

Learners should have access to appropriate audio and visual recording and editing production and post-production equipment. All resources must be up to date, and of near-industrial standard and capability. Learners should be given facilities that will enable them to conduct appropriate pre-production investigation tasks.

A range of examples of advertisements made for television should be used for class reviews, helping to create an understanding of what constitutes effective examples and those which are less successful in their ambitions. Learners will need access to a library or media centre having internet facilities and ideally telephone and email. If possible, this should be within a production office or workshop.

Indicative resource materials

Textbooks

Ashby P and Keating E — *Television Killed Advertising* (Oktober Books Ltd, 2009) 978-0955772832

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Bignell J — *Media Semiotics* (Manchester University Press, 2002) 978-0719062056

Branston G and Stafford R — *The Media Students Book* (Routledge, 2006) 978-0415371438

Brierley S — *The Advertising Handbook* (Routledge, 2001) 978-0415243926

Butterfield L — *Excellence in Advertising* (Butterworth-Heinemann, 1999) 978-0750644792

Dibb S — *Marketing Briefs: A Revision and Study Guide* (Butterworth-Heinemann, 2004) 978-0750662000

Hardy P — *Filming on a Microbudget* (Pocket Essentials, 2008) 978-1842433010

Hart J — *Storyboarding for Film, TV and Animation* (Focal Press, 1999) 978-0240803296

Holland P — *The Television Handbook* (Routledge, 2000) 978-0415212823

Jones C and Jolliffe G — *The Guerrilla Film Makers Handbook* (Continuum International Publishing Group, 2006) 978-0826479884

Kindem G and Musburger R — *Introduction to Media Production* (Focal Press 2009) 978-

Klein N — *No Logo* (Flamingo, 2001) 978-0006530404

Krisztian G and Schlempp U N — *Visualizing Ideas: From Scribbles to Storyboards* (Thames & Hudson Ltd, 2006) 978-0500286128

- Millerson C and Owens J — *Production Handbook* (Focal Press, 2008) 978-0240520803
- Musburger R — *Single-Camera Video Production* (Focal Press, 2005) 978-0240807065
- Pricken M — *Creative Advertising: Ideas and Techniques from the World's Best Campaigns* (Thames & Hudson, 2008) 978-0500287330
- Robinson M — *The Sunday Times 100 Greatest TV Ads* (Times Educational Services, 2000) 978-0007111237
- Samuel L — *Brought to You by: Postwar Television Advertising and the American Dream* (University of Texas Press, 2002) 978-0292777637
- Thurlow C — *Making Short Films* (Berg Publishers, 2008) 978-1845208042
- Tumminello W — *Exploring Storyboarding* (Delmar, 2004) 978-1401827151
- Watson J — *Media Communication: An Introduction to Theory and Process* (Palgrave Macmillan, 2008) 978-0230535497
- White R — *Advertising: What It Is and How to Do It* (McGraw-Hill Higher Education, 1999) 978-0077094584
- Wilmhurst J and Mackay A — *Fundamentals of Advertising, 2nd Edition* (Butterworth-Heinemann, 1999) 978-0750615624

Websites

- www.adbrands.net — information on leading agencies and advertisers in the world's major advertising markets (with examples of their work)
- www.artsandlibraries.org.uk — Arts and Libraries
- www.artscouncil.org.uk — Arts Council of England
- www.asa.org.uk — the Advertising Standards Authority regulates the content of advertisements, sales promotions and direct marketing in the UK.
- www.barb.co.uk — Broadcasters' Audience Research Board is the organisation responsible for providing the official measurement of UK television audiences
- www.bbc.co.uk — provides access to related resources via its own subdirectory
- www.bbctraining.com — introductions guides to radio, television, audio/video recording, web design, post-production and journalism etc.
- www.creativereview.co.uk — on line magazine for visual communication
- www.englishandmedia.co.uk — English and Media Centre website, containing resources and publications
- www.hse.gov.uk — the Health and Safety Executive
- www.medialearners.com — information about media industries, production
- www.mediastudents.com — information about media industries, production, qualifications, and an extensive database of links to other relevant sites

www.sharedteaching.com — free website for teachers and learners

www.theory.org.uk/student-tips.htm — website offering a set of original online resources and relative links

www.thinkbox.tv — the marketing body for the UK commercial television industry

Unit 12: Audio Production Processes and Techniques

Unit code: M/600/0119

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to encourage learners to develop beyond the basic use of audio equipment, developing a deeper understanding of sound and acoustics together with techniques for audio capture, mixing and editing skills.

Unit introduction

The importance of sound and music to media productions should never be underestimated. Sound and music not only set the mood and emphasise the emotional content of the production but also help focus the viewer's or listener's attention on the visual content. The quality of sound and its design are vital to all aspects of media including film, television, radio broadcast, podcasts and internet broadcasting. As the quality of domestic equipment increases and more people buy surround sound systems, consumers will demand better and better quality sound. This will apply to all areas from costume dramas, documentaries, sports and news broadcasts to animations, games and live music broadcast.

Professionals in the industry know that clarity and sound integrity are of utmost importance. This clarity is produced by a good knowledge of the basic principles of sound recording and production techniques, which lead to the intelligibility of dialogue, the correct balance of music and effects and the appropriate sound treatment for different transmission media. Developing an understanding of the basic language of sound, along with associated listening skills, will help learners to critically evaluate their own and other learners' work and compare it to past and current practitioners.

This unit allows learners to develop beyond the basic use of audio and radio equipment, extending their knowledge and understanding of technical characteristics through theoretical input and investigation. It allows learners to take an experimental approach, gaining new production skills and discovering the effects on recorded sound of changing equipment or location. Learners will develop their editing and post-production techniques and their technical and aesthetic understanding of sound and music production for a media product. It is not intended that learners study the mathematics and physics of sound in this unit.

Emphasis on listening skills, communication skills and the basic principles of sound engineering are in line with industry expectations of learners. Employers in the industry look out for good communication skills as well technical expertise and there are opportunities to develop good communication skills in this unit.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand characteristics of different acoustic environments in relation to recording sound	1.1	describe characteristics of different acoustic environments in relation to recording sound with some appropriate use of subject terminology
2	Understand conventions in audio production and post-production	2.1	describe conventions in audio production and post-production with some appropriate use of subject terminology
3	Be able to capture and record sound from different sources	3.1	produce recorded sound from a variety of sources with some assistance
4	Be able to mix and edit recorded sound.	4.1	produce mixed and edited sound tracks working within appropriate conventions and with some assistance.

Unit content

1 Understand characteristics of different acoustic environments in relation to recording sound

Indoor acoustics: the principles of sound and acoustics; studio-based acoustics; live room; dead room; in-situ recording; surface types and properties; reverberation; sound proofing; making the most of available acoustic areas; screening

Outdoor acoustics: actuality; sound bites; background atmosphere; unwanted noise; unwanted ambience; wind noise

Simulated acoustics: effects units; processors; compression and limiting; computer-based software; surround sound; mono; stereo; multi-channel; phase; pitch; time delay; indirect recording

2 Understand conventions in audio production and post-production

Technical conventions: studio layout and operation; recording and playback formats; file transfer and transfer bays; linear and nonlinear recording systems; ISDN; telephone; delay lines; profanity and blasphemy; effects; sequences; production and post-production stages and processes; production roles

Legal issues: copyright; performing rights; licences; contracts

3 Be able to capture and record sound from different sources

Audio capture: studio and outside broadcast; interviews; atmosphere; live performances and conferences; monologue; dialogue; group debate; audience interaction; participation

Microphone types and characteristics: dynamic; capacitor; electric condenser; ribbon; carbon; crystal hand-held; stand; tie-clip; rifle; boom; associated polar diagrams (omni, cardioid, hyper-cardioid); radio microphones

Pre-recorded sources: DVD; CD; tape; hard disc; MiniDisc™ sound file formats, eg MP3; file conversion; as-live recordings; live recordings; concerts; interview material; commentary; library material

Recording equipment: interfaces; cables and gain stages; mixer inputs and outputs; signal flow and levels; metering and monitoring; the integrity of the sound signal; direct injection; multi-track; stereo and single-track recording; analogue recording; digital recording; linear; nonlinear; CD; DVD; hard disc

4 Be able to mix and edit recorded sound

Mixing audio: for radio; for music; sound for games; mixing for record release; production possibilities; audio post-production; live sound; recordings; studio recordings; analogue; computer-based software; compression and equalisation; the use of reverberation and effects; synchronisation; recording and sequencing software; midi; synthesisers; sampling software

Editing: speech; music; background noise and ambience; content; corrections; linear editing; nonlinear editing; edit lists; play lists

Delivery

It is vital in this unit that learners understand the importance of learning the basic principles of audio recording and how to develop their listening skills. They should also become aware of the need to experiment with many different types of music and sound. They should be encouraged to experiment with natural, acoustic sounds and to listen to how those sounds change in different acoustic environments. Learning outcome 3 gives learners the scope to record and mix sound from many sources of their choice, which can reflect an area of personal interest. The possibilities can be outlined in theory and learners then encouraged to experiment with the equipment available.

This unit is part theory, part practice. An active experimental approach is encouraged for the practical elements. Demonstrations and class lectures would be appropriate for the teaching the theory, although learners should be encouraged to 'fact find'. They should be encouraged to work and experiment individually and in pairs, taking care to generate, for themselves, sufficient evidence of their discussions and the results. This will be done by keeping a log or journal of their experiences.

Learners should be encouraged to listen to and analyse different acoustic environments. This can be done without the use of complex mathematical formulae as the descriptions can be framed in the context of the 'sound spectrum' and where the sounds fit into the spectrum. Learners can describe how the acoustic environment affects the 'clean' sound and it will be useful for learners to not only electronically record the sounds for presentation but also to record their written descriptions of the sounds in their sound log or journal. It is useful to develop a common graphic representation of the sound spectrum so that experiences can be documented graphically as well as in words. Learners should be encouraged to explore and note sounds that they experience in their everyday lives. They can also be encouraged to observe how the sound and its environment affect the emotional content of productions.

A simple introductory exercise would be to record the same sound with different microphones and varying pick up patterns. Learners can then discuss the different characteristics of the microphones and their usage.

Exercises can be designed for either group or individual work, but learners will get the greatest benefit from working and discussing together. It is best if the exercises follow the tutor's instruction on the concepts needed for the exercise. After this, learners should be comfortable with exploring the subjects on their own. Learners can be encouraged to make presentations of their recordings and discuss the problems encountered and how they approached solving them.

There are several trade journals that give useful information on recording and production techniques and in this way learners can obtain not only information about basic principles but can keep up with techniques currently being used by professionals. Many of the microphone and other equipment manufacturers give excellent technical and application information on their websites.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Whole class sessions covering acoustic environments, including visits to relevant areas where learners can encounter varying acoustic properties.
<p>Assignment 1 – Acoustic Environments.</p> <p>Brief from a trade magazine to write a piece on how acoustic environment can affect recorded sound. Article to include diagrams and technical information.</p> <p>Learners will:</p> <ul style="list-style-type: none"> • receive assignment overview • research characteristics of different acoustic environments, natural and artificial • write article • receive assessment feedback and have further opportunities to address grading criteria.
Whole class sessions with examples of equipment and discussion of techniques.

Topics and suggested assignments and activities

Assignment 2 – Conventions in Audio Production and Post-production.

Brief to prepare and deliver a presentation to a recording industry career seminar on the processes and conventions in audio production and post-production, with reference to copyright and contracts.

Learners will:

- receive assignment overview
- carry out individual research
- collate evidence and analyse it
- prepare presentation
- give presentation
- receive assessment feedback and have further opportunities to address grading criteria.

Assignment 3 – Capture Environment.

Request from prospective employer to submit a portfolio of recordings from a variety of sources and acoustic environments.

Learners will:

- receive assignment overview
- prepare materials and diagrams
- carry out individual practical sessions to complete recordings
- receive assessment feedback and have further opportunities to address grading criteria.

Whole class sessions on mixing, realisation, and editing skills – to include individual learner skills development – practical exercises.

Whole class sessions on technical and legal considerations.

Assignment 4 – Mixing and Editing.

Brief from a production company to edit and mix a series of supplied multi-track recordings.

Learners will:

- receive assignment overview
- carry out individual practical sessions to produce sound tracks
- prepare materials (including screen shots and diagrams)
- receive assessment feedback and have further opportunities to address grading criteria.

Assessment

Evidence for assessment

Evidence for achievement of learning outcomes 1 and 2 might be presented as a report with audio and graphic examples. If the report is given as a presentation, the presentation must be recorded for the purposes of internal and external verification.

For learning outcomes 3 and 4 evidence will comprise recorded audio material along with reports describing the processes undertaken. Another form of evidence might be observations of learners carrying out procedures (for example, positioning microphones) supported by the learners' accompanying documentation, such as sketches of microphone positions. If this evidence is recorded as witness or observation reports care must be taken to ensure that at least 50 per cent of such assessments are subject to internal verification.

Recordings produced should exemplify experimentation with different recording and mixing equipment and the effect on sound of changing the recording location. Reports can be in the form of logs, portfolios or blogs, which should contain evidence of how the recordings were planned and executed. This could include track sheets, pre-production planning schedules, studio and equipment booking procedures. Innovative approaches might be chosen, for example to provide content for a CD ROM or website designed for training and learning purposes.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the pass criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners at this level will give accurate, relevant and substantially full, though not absolutely complete, descriptions of the acoustic environments that they have encountered and must use some appropriate and relevant technical terms in their descriptions. A learner's notes might for example, include the observation that a room which has appeared to have quite a 'live' acoustic could become quite 'dry' once the audience has arrived and become seated.

2.1: learners at this level will show a basic but accurate understanding of conventions in audio production and post-production including for example recording and playback formats, copyright issues, the use of delay lines and issues with content such as profanity and blasphemy.

1.1 and 2.1: evidence will reflect a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

3.1: learners will be able to produce recorded sound from different locations. They will show by doing this that they have understood the recording process and the care that needs to be taken of the sound from source to monitoring and reproduction, but their results will not always be technically consistent. The quality of sound should be acceptable and any interference from outside sources – particularly where location recording is involved – should be minimal.

4.1: learners will show that they have some sense of balancing sources, creating appropriate fades and that they are able to use the effects and processors on a sound mixer. The quality of the sound should be acceptable in that any voices are intelligible and also any equipment noise or distortion from any source does not detract from the final mix. In terms of the imaginative qualities of their work, learners will not move beyond the conventional.

3.1 and 4.1: learners should demonstrate a methodical approach to recording and the presentation processes, though results will not always be consistent. When engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Acoustic Environments	Brief from a trade magazine to write a piece on how acoustic environment can affect recorded sound. Article to include diagrams and technical information.	<ul style="list-style-type: none"> • Research notes. • Summaries of research. • Written articles.

Criteria covered	Assignment title	Scenario	Assessment method
2.1	Assignment 2 – Conventions and Processes	Brief to prepare and deliver to a career seminar on the recording industry a presentation on the processes and conventions in audio production and post-production, with reference to copyright and contracts.	<ul style="list-style-type: none"> • Research notes. • Summaries of research. • Slides and notes for presentation. • Recording of presentation. • Tutor observation. • Report.
3.1	Assignment 3 – Capture Environment	Brief from prospective employer to submit a portfolio of recordings from a variety of sources and acoustic environments.	<ul style="list-style-type: none"> • Report on microphone and equipment choices. • Layout and connection diagrams. • Track sheets and log. • Portfolio of recordings.
4.1	Assignment 4 – Mixing and Editing	Brief from a production company to edit and mix a series of supplied multi-track recordings.	<ul style="list-style-type: none"> • Tutor observations. • Audio recordings. • Recording log. • Track sheets.

Essential resources

Equipment should include portable recording equipment, different types of microphones and stands, nonlinear recording and editing facilities (preferably of an industry standard). A recording studio, properly structured for learning purposes, is desirable. Tape recording and analogue editing may still be relevant for a number of years, but should no longer be a primary activity, although the principles used are essential to the understanding of the language and operation of nonlinear software. Such equipment should, therefore, be available. The library should hold copies of up-to-date books on sound recording, as well as relevant industry journals.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Borwick J (editor) — *Sound Recording Practice, Fourth Edition* (Oxford University Press, 1996) 0198166087

Huber and Runstein — *Modern Recording Techniques* (Focal Press, 2005) 978-0240806259

James P (editor) — *The Live Sound Manual* (Backbeat Books, 2002) 0879308494

Moulton, D — *Total Recording* (KIQ Productions, 2002) 0240805453

Nisbett A — *Sound Studio* (Focal Press, 1995) 978-0240513959

Rumsey F and McCormick T — *Sound and Recording, Fifth Edition* (Focal Press, 2006) 978-0240513133

Toole F — *Sound Reproduction* (Focal Press, 2008) 978-0240811321

Journals

Audio Media

Light and Sound International

ProSound News

Resolution

Sound on Sound

Websites

www.soundonsound.com – website of the magazine

Unit 13: Communication Skills for Creative Media Production

Unit code: Y/600/6609

QCF level: 3

Credit value: 5

Guided learning hours: 30

Unit aim

The aim of this unit is to ensure that learners are able to communicate effectively in creative media production contexts in writing and orally.

Unit introduction

This unit aims to improve the functional communication skills of learners and should be taught in production contexts through other mandatory and optional units. The unit relates not only to wider communication skills as a whole, which are an essential part of everyday life, but specifically targets skills that learners can expect to use on a regular basis within the creative and media sector such as pitching ideas, writing proposals and constructing reports. They will therefore develop their ability to communicate their thoughts and ideas through pitches, proposals and reports to a range of audiences using appropriate modes of address and forms of technology. Learners will also develop skills in checking and proof reading written materials.

Through this unit they will learn how to select from and summarise information gained from sources when conducting research for assignments or productions.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to extract information from written sources	1.1 use appropriate techniques to extract relevant information from written sources
2 Be able to create a report in a media production context	2.1 present a media production report which conveys relevant information 2.2 review reports to make changes with occasional beneficial effects
3 Be able to pitch a media production proposal using appropriate technology.	3.1 deploy and manage appropriate technology to pitch a media production proposal 3.2 employ appropriate forms of address in a media production pitch to communicate ideas.

Unit content

1 Be able to extract information from written sources

Written sources: eg books, journals, websites, magazines, newspapers, handouts

Reading: with concentration; skim-reading: scanning; using index; using word search; using phrase search

Extract information: eg write notes, summarise, highlight text, annotate document, underline passages, copy and paste extracts

2 Be able to create a report in a media production context

Create report: content; structure; linguistic register; summary; index; presentation; visuals eg illustrations, graphics, charts, graphs

Contexts: eg for client, for employer, market assessment, market analysis, product analysis, self-evaluation

Revision: proof reading (spelling, punctuation, grammar, clarity of expression, structure of content); electronic checks (spelling, punctuation, grammar, thesaurus)

3 Be able to pitch a media production proposal using appropriate technology

Proposal: outline of idea; costs; requirements, eg locations, talent, crew; audience; USP (unique selling point)

Technology: presentation software eg PowerPoint, Keynote, Google Presentation, SlideRocket, Adobe Acrobat; slide design; transitions; visual aids eg animations, video clips, audio clips, clip arts, charts, graphs, screen shots, web pages; copyright issues

Address: clarity of voice; tone of voice; register e, authoritative, humorous; clarity of expression; use of technical language; maintaining engagement eg eye contact, reinforcement of points, reference to screen

Essential guidance for tutors

Delivery

This unit is designed to encourage and develop sound communications skills amongst learners and as such will need to be placed in a vocational context. It is recommended that communication skills be tracked within as many other units taken by the learner as possible to ensure a good coverage of the learning outcomes and to allow learners to achieve as highly as possible across the grading criteria. Attention should be given to teaching communication and formal presentation skills in order to help learners achieve this unit, but the assessment of the unit will not require the production of unit specific evidence as this can be derived from any other units in the programme in which learners are required to communicate their ideas or other information, whether formally through a presentation to an audience or informally to their tutors or a client.

The programme of suggested assignments and outline learning plan, whilst not exhaustive, detail and highlight areas in which delivery of the unit can take place. Practical units will offer numerous opportunities for learners to plan, prepare and deliver oral presentations in a vocational context. There will also be opportunities for written reports, assignments and essays to be produced within other units which will allow for the use of written communication, evaluative techniques and reviewing processes.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Class discussions outlining the need for good communication skills: <ul style="list-style-type: none">• oral communication• personal interaction• written communications• presentation techniques• annotation and note-taking techniques.

Topics and suggested assignments and activities

Paired exercise in note-taking techniques:

- sourcing information in different formats
- making relevant copies in preparation for annotation and note-taking
- annotating work using relevant formats and techniques
- taking notes
- checking through each others work sharing ideas and information.

Writing techniques:

- report writing
- essay writing
- constructing production paperwork
- writing copy
- revision techniques.

Reviewing production work — written and oral:

- looking at how to use correct phrases and terminology depending on medium
- discussing evaluative processes and techniques
- summarising and reviewing own processes and productions
- reviewing and feeding back to others on their work.

Understanding presentation techniques:

- discussing possible presentation techniques
- reviewing recorded presentations
- paired exercise practicing presentation techniques.

Presentations:

- to clients
- to tutors
- to peer group.

Preparation of work responding to client briefs:

- recording ideas generation
- preparing proposals
- preparing pitches
- giving pitches.

Assessment

Evidence for assessment

Assessment evidence for individual criteria need not come from the same work for a single unit and should be drawn from as many different areas as possible to allow for greater learner achievement overall. The final award for the unit should reflect a learner's highest achievement across the whole programme. For example, written communication skills can be effectively covered through units that require learners to produce such items as newspaper or magazine copy or final articles for publications. Similarly written skills can also be utilised when learners are writing assignments, pitches, proposals, treatments etc.

Evidence of achievement for assessment criterion 1.1 will take the form of print outs and copies of the work from which information has been extracted with evidence of annotations being made throughout. There could also be some form of write up that outlines and highlights the relevance and purpose of the research undertaken.

Evidence of achievement of assessment criteria 2.1 and 2.2 can be recorded in a number of ways as there are many forms of documentation that can be used for written assignment work including, reports, articles, leaflets, flyers and other relevant formats. It is also important that evidence is provided to show that relevant spell checking and proof reading has been carried out.

Evidence of achievement of assessment criteria 3.1 and 3.2 will, when assessing oral presentations, most likely be drawn from tutor observation of learners working with one another on client pitches. Such observations must be carefully recorded, and wherever possible final assessment should be based on a number of observations undertaken by different tutors. Written materials, in the form of printed copies of presentation slides, can also be provided for assessment as well as audio or audio visual copies of pitches.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: when conducting research for assignments and reports learners will be able to select and review from different sources such as book, the internet and appropriate materials that will aid them in their work. Information will be selected from these sources with some attention to its suitability and relevance to the work being undertaken.

2.1: learners will produce a report in the appropriate context that contains information relevant to the topic being studied. Their use of language will be sound but somewhat basic and restricted more to description rather than exemplification and may contain some basic errors of spelling. Similarly evaluative work will be basic and tend more towards descriptions of decisions and processes such as, 'for this task we decided to work in a group of two, which I was happy with as I like John and we get on.'

2.2: work will have been reviewed and revised using both a grammar and spell checker as well as being individually proof read. As a result spelling errors will have been corrected but there may still be mistakes such as 'where' for 'were', 'super' for 'supper' or 'their' for 'there' that have not been picked up. Work will also still contain some basic punctuation and grammatical errors where learners have not adequately reviewed their work.

3.1: choices of presentation technology for pitch will be generally sound and appropriate use will be made of that technology throughout. Learners at this level will tend to choose more simplified software such as PowerPoint and though visual aids or graphics will be unsophisticated and typically not be clearly linked to the content of the pitch they will nonetheless provide the basic relevant information.

3.2: in assessing 'appropriateness' the context of the pitch needs to be taken into account. To achieve a pass it is sufficient for learners to understand and use the right tone, style and register for the occasion.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Undertake research for an assignment or project	Conduct research for a defined purpose and extract relevant information.	<ul style="list-style-type: none"> • Research log. • Collated research notes.
2.1 2.2	Complete a report	Write up results of research or complete a project report and revise.	<ul style="list-style-type: none"> • Presentation of research in a report with drafts. • Final written assignment and drafts.

Criteria covered	Assignment title	Scenario	Assessment method
3.1 3.2	Respond to a client brief and pitch ideas	Produce a proposal and pitch in response to a client brief.	<ul style="list-style-type: none"> • Proposal. • Pitch slides, speaker's notes and handouts. • Recording of pitch. • Tutor observation.

Essential resources

Spelling and grammar checkers should be available on the software packages being used, as well as formatting and page layout facilities. Centres should provide standard forms for treatments, scripts, location recce's, risk assessments, and production and research logs for learners to work with.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Bradbury A – *Successful Presentation Skills*, 3rd Edition (Koogan Page, 2006) 978-0749445607

Condrill, J and Bough, B – *101 Ways to Improve Your Communication Skills Instantly* (GoalMinds Inc, 1999) 978-0966141498

Cottrel S – *Critical Thinking Skills: Developing Effective Analysis and Argument* (Palgrave Macmillan, 2005) 978-1403996855

Hargie, O – *The Handbook of Communication Skills*, 2nd Edition (Routledge, 1997) (ISBN 0415123267, 9780415123266)

Jeffries L and Mikulecky B – *More Reading Power: Reading for Pleasure, Comprehension Skills, Thinking Skills, Reading Faster* (Pearson, 2003) 978-0130611994

Websites

www.bbc.co.uk/keyskills — online resources for practicing communication skills

www.learndirect.co.uk – government website with links to online courses

www.mindtools.com – free online tools which help you discover and develop essential communication skills and techniques.

Unit 14: Computer Game Story Development

Unit code: K/502/5677

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to game story writing. Learners will use structured gameplay and research to examine backstory, story and dialogue used in games and will study and practise story writing strategies. Learners will create story and dialogue for a game.

Unit introduction

As games have become more and more mainstream entertainment and their development budgets have grown larger, the importance of good writing has also grown. For a game to be successful it is vital that developers create a solid story and life-like characters to guide players through the game space while allowing them to have a personal game experience.

Narrative is developed in 'storyplay' — the mingling of storytelling and gameplay which allows players influence over both what the story is about and how that story is experienced. Good game writers can produce complex narratives which anticipate the way interactivity and non-linearity will affect a user's experience of their story.

Well rounded characters are expected by the modern game player because full characterisation encourages that suspension of disbelief which enables immersion in the game and contributes to the success of the title. Also, in many games, the player experiences what the main character experiences during the course of the story. Character development through 'backstory' provides the characterisation so important to modern game development and adds to the realism of the game.

This unit aims to provide learners with an appreciation of the underlying principles of storytelling and how it can enhance a player's immersion in the game world. A study of game storytelling and character development is important to help learners acquire the skills needed to create dramatic tension and intricate storylines, which in turn generate more compelling and dramatic play experiences. Learners will develop a sound understanding of game story writing strategies before applying them to their own interactive narratives.

Learners will develop an understanding of how to use elements such as narration, monologue and dialogue to serve the purposes of their game story and will apply their observations of human attitudes and emotions to the development of convincing characters for their game concept.

This unit will also develop the learners' ability to reflect critically on their own work, as they will need this professional skill in any future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand the elements of storytelling for games	1.1	summarise accurately the elements of storytelling for games using some subject terminology appropriately
2	Be able to create story for a game following industry practice	2.1	create story for a game following industry practice, working within appropriate conventions and with some assistance
3	Be able to create game dialogue following industry practice.	3.1	create game dialogue following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand the elements of storytelling for games

Forms of storytelling: cave painting; oral traditions (fable, myth, legend); theatre; text; film; television

Game genres: action, eg platforms, first-person shooter (FPS), third-person shooter (TPS), racing, fighting; adventure; puzzle; role-play; simulation and sports, eg turn-based strategy (TBS), real time strategy (RTS)

Approaches: location; conditions; actions; symbolism; three-act structure (beginning, middle, end); hero's journey (12 steps); episodic

Representation: emotions; characterisation; stereotypes, eg gender, ethnicity

Emotional themes: vengeance; happiness; fear; anger; perseverance; heroism; valour; hope; competitiveness

Interactive story: embedded; emergent; cinematics; cut-scenes; triggered events; player control; character customisation

Writing strategies: pre-writing, eg brainstorm, research, storyboard, list, sketch, outlining, freewriting; drafting (working title, write content); revision, eg add, rearrange, remove, replace, evaluate

2 Be able to create story for a game following industry practice

Purpose: concept, eg original intellectual property (IP), franchised IP, prequel, client brief; target audience

Components: theme; setting; context; backstory; premise

Plot devices: types, eg petition, deliverance, revenge, pursuit, disaster, revolt, enigma; exposition (inciting incident); foreshadowing; conflict or problem (internal, external); complication, eg rising action after inciting incident; goals, eg MacGuffin; ticking clock; plot twists, eg red herring, reversals; climax; *deus ex machina*; suspense; resolution; conclusion

Character types: antagonist; protagonist; guardian; sidekick; player character; non-player character (NPC)

Character backstory: physiological, eg gender, age, weight, appearance, actions; speech (native tongue, accent, words, tone); sociological, eg friends, family, economic power, occupation, education, race, political views; psychological, eg beliefs, temperament, optimism, pessimism, extrovert, introvert, complexes, intelligence; issues of representation, eg ethnicity, gender, age; character growth, eg character arcs; relationships (dyad, triangle); character capabilities, eg able to use a lasso, to climb, to jump; status, eg wardrobe (armour), inventory

Narrative flow: linear; non-linear (branching narrative)

Industry practice: reflect on finished story (compared with original intentions, fitness for purpose, literary qualities); production skills (ideas generation, workflow and time management, teamwork)

3 Be able to create game dialogue following industry practice

Game dialogue sources: eg design documents, game story, script

Verbal elements: narration, eg first-person, third-person, voiceover (VO), off screen (OS); monologue; dialogue

Script writing: layout (action, scene headings, character name, extension, dialogue, parenthetical, transition, shot, dual-dialogue); storyboard; flowchart

Industry practice: reflect on finished game dialogue (compared with original intentions, fitness for purpose, literary qualities); production skills (ideas generation, workflow and time management, teamwork)

Delivery

This unit is designed to provide learners with knowledge of how story and character development is used in a game to enhance the player's experience. Learners should develop an understanding of how story and dialogue are used and produced for games. Learners must experience backstory, story, character backstory and character dialogue for games.

Successful teaching of this unit requires a blend of tutor-led lecture, practical sessions and individual learner research and reading. Learners will need to observe the use of backstory, story and dialogue in games. This is best achieved via structured gameplay using a wide variety of game genres. Research will include the internet as well as taking part in the playing of a wide variety of games; the learners should focus on how story is used to enhance the player's experience. Although this game playing is an essential aspect of research in this unit, it must not outweigh the other methods of learning. When playing games the learner must understand the specific reason for such play.

It is suggested that teaching follows the order of the learning outcomes, starting with an introduction to the history of storytelling and moving on to appreciation of game genres and their differing narratives. This could be followed by an analytical study of the principles of story writing and an examination of some simple writing strategies. Tutor-led examples of cut-scenes from current and past game titles can be used to illustrate plot devices and character development. A sequence of recorded gameplay sessions could be used to illustrate the progress of a game story.

Practical story-writing exercises can be used to consolidate the learning of principles and strategies. Learners could create story ideas, analysing these to identify their plot types. Then learners could suggest consequences if plot type changes, and begin to identify characters and contrast the conflicting character goals. When studying character backstory, learners could choose characters from books or movies that exemplify character types. They could develop these characters further, extending qualities and projecting ideas for sequels. internet research could be used to source still images of characters, and learners could be invited to create backstory to match the image. This could be extended to include photographs, with permission of willing subjects, who might find themselves characterised in an experimental game story.

Learners might form narrative teams, brainstorming game worlds and then individually creating episodic non-linear stories (game levels) with common characters, introducing new characters which could be shared with other levels, to create a well-populated game story of several episodes with varying character types. This should enable learners to better understand

components used to produce an immersive game story using plot devices and narrative flow. This exercise could then be extended to allow consideration of possible dialogue between characters, NPCs and the player. Once the verbal elements of the dialogue are proposed, learners should examine how the industry expects scripts to be presented, noting the important elements to be included. A variety of presentation methods should be experienced so that the learner is better able to comply with expectations in any possible future career.

Critical self-reflective practice is important to all creatives, and is an important personal professional tool. This can be achieved through self-evaluation or peer/client testing and recorded through a report. Learners should be encouraged at every opportunity to record their evaluative comments for future reflection and for personal development. Reflections could be noted in personal logs, blogs or wikis.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to how story and character development is used in a game. Learners: <ul style="list-style-type: none">• receive lectures to explain forms of storytelling• receive lectures, hold discussions and attend demonstrations to examine how story and character development is used in a game to enhance a player's experience• receive lectures and hold discussions to examine common game genres and their differing narratives• receive lectures to explain the principles of story writing and simple writing strategies• play computer games which exhibit the use of good story and character development, make notes and discuss observations.

Topics and suggested assignments and activities

Assignment 1 – Storytelling Essentials.

Learners will write an article for an online games ezine on how game designers use story to enhance a player's gameplay experience.

Article will cover:

- forms of storytelling
- game genres
- approaches
- representation
- emotional themes
- interactive story
- writing strategies.

Introduction to common principles and strategies used to assist in the creation of story in games.

Learners:

- carry out practical story-writing exercises
- analyse game stories to identify plot types and devices
- analyse character backstory and narrative flow.

Assignment 2 – Project X: Story.

Learners receive a brief from a producer to create the story for a new game including backstory, characterisation and dialogue.

Learners will produce a development log covering:

- purpose
- components
- plot devices
- character types
- character backstory
- narrative flow
- reflections on finished game story.

Introduction to game dialogue content production through workshop sessions.

Learners:

- identify dialogue source
- carry out practical dialogue-writing exercises
- carry out practical scripting exercises
- reflect on finished game dialogue.

Topics and suggested assignments and activities

Assignment 3 – Project X: Narration and Dialogue.

Learners will produce a portfolio containing documentation that covers:

- game dialogue sources
- verbal elements of narration
- script
- reflections on finished game story.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of learning outcome 1 is likely to comprise presentations or reports describing storytelling. An innovative approach could be to require learners to prepare a linear multimedia narrative showing the history of storytelling through the ages and culminating in descriptions of the purpose and approaches to modern interactive story writing.

Evidence for achievement of learning outcomes 2 and 3 is likely to be achieved through the production of two separate though related documents: the game story including characterisation (character backstory) and a document detailing character dialogue and narration. The game story should include both linear and branching narrative. Learners should reflect upon the work produced through a written or oral report, assessing its suitability for purpose and making an informed judgement on its qualities. Written reports could take the form of personal logs, blogs or wikis.

Presentations must be recorded for the purposes of internal and external verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe elements to telling a story including reference to historical approaches, genres, representation, emotional themes, interactive story, and writing strategies. Though these descriptions will be basic and conventional and might lack formal terminology, they will be correct and will cover the main details. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it. A learner might note for example, 'The narrative approach is the storyline. Every story has a start, a middle and an end. An emotional theme in a game helps the player understand the character.'

2.1: learners will produce a story for a game. To achieve this unit it is necessary that the learner's work relates to their intended story purpose though the connection may be tenuous and loose. Learners will typically use components which are not well developed and are unclear and conventional. Learners will employ only a few basic conventional plot devices but must be able to identify character types involved and provide some characterisation (character backstory), though this may be basic, conventional and lacking imagination. To achieve a pass, learners must include both branching and linear narrative and review their own story-writing work considering literary qualities and fitness for purpose.

3.1: learners will produce game dialogue which may include narration, voiceover or off-screen speech. They will, for the most part, correctly follow the technical requirements for setting out a script. Learners will review their own game dialogue work considering literary qualities and fitness for purpose.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit. Learners will make comments evaluating their own work. This evidence should discuss both story and dialogue work. Learners will make comments on fitness for purpose (considering client brief or target audience) and will write about their application of writing strategies, commenting on how they have used plot devices and implemented character backstory. They will make brief, superficial comments that do not address opportunities for future improvement or explain why decisions were taken. They will not refer to examples from their

work to illustrate points made. To achieve this unit some suitable correct terminology must be evidenced. For example, the learner might note, 'Overall I think my story was very good and that it would work well in a game. It had a beginning, a middle and an end. My story has a great climax. I had a hero and a villain. My characters had different ages, sexes and colours. My dialogue could be better.'

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Storytelling Essentials	Article for an online games ezine on what makes a good game story.	<ul style="list-style-type: none"> All preparatory notes. Article as word-processed or electronic document.
2.1	Assignment 2 – Project X: Story	Brief from a producer to create the story for a new game including backstory, characterisation and dialogue.	Development log containing: <ul style="list-style-type: none"> all story ideas notes, sketches, storyboard finished story personal reflective comments.
3.1	Assignment 3 – Project X: Narration and Dialogue	As above.	Project portfolio containing: <ul style="list-style-type: none"> planning notes all production documentation finished script personal reflective comments.

Essential resources

For this unit learners will need access to a variety of games mounted on a variety of platforms in order to investigate story used in games. Learners will need access to research information when investigating storytelling for games. Typically this would include: books, developers and their websites, and game community websites. Normal office software will permit digital presentation of story and dialogue scripts.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Crawford C — *Chris Crawford on Interactive Storytelling* (New Riders, 2004) 978-0321278906

Dille F and Platten J Z — *The Ultimate Guide to Video Game Writing and Design* (Lone Eagle, 2008) 978-1580650663

Glebas F — *Directing the Story: Professional Storytelling and Storyboarding Techniques for Live Action and Animation* (Focal Press, 2008) 978-0240810768

Krawczyk A and Novak J — *Game Development Essentials: Game Story and Character Development* (Thompson Delmar Learning, 2006) 978-1401878856

Miller C H — *Digital Storytelling: A Creator's Guide to Interactive Entertainment*, 2nd Edition (Focal Press, 2008) 978-0240809595

Websites

en.wikipedia.org/wiki/Interactive_fiction — explanation of interactive fiction

www.activision.com — information on game titles with story outlines and graphics

www.designersnotebook.com — Ernest Adams site of general information on game design

www.eidos.com — information on game titles with story outlines and graphics

www.ferryhalim.com/orisinal — online Flash games

www.gamasutra.com — general games industry information

www.gamedev.net — search for 'writing and story development'

www.gamespy.com — information on game titles with story outlines and graphics

www.igda.org/writing/articles.html — quick guide to games writing

www.igda.org/writing/WritersGlossary.htm — glossary of game writing terms

www.kirupa.com/developer/actionsript/gamestory.htm — step-by-step instruction guide on how to make an awesome and compelling story

www.maxis.com — information on game titles with story outlines and graphics

www.skillset.org/games — Skillset's computer games web pages

www.writing.com — online community for writers

Unit 15: Creative Media Production Management Project

Unit code: F/600/6703

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This aim of this unit is to provide learners with the understanding, knowledge and skills required to manage the production of a media product from the initial idea through to completion.

Unit introduction

Working within the media industry involves a wide variety of people with a wide variety of skills in evolving organisational structures all working towards the production of a particular product. The organisation of any media product will be dictated by the limits of the production and the focus of the product itself, whether it be a promotional video, a radio programme, a website, or a newsletter. It will involve overall control through a manager or management team and imaginative direction through the creative team. In addition, the production will come to life through the skills and knowledge of individuals and specialised teams who will manage and develop their key areas of responsibility.

This unit gives learners the opportunity to enhance their skills through the planning and management of a media production. Learners will apply the skills, knowledge and understanding which they have developed in other units to the management of a media production either by undertaking and managing an individual assignment or through taking a major role in a production team which is broken down into several smaller teams, possibly encompassing several different media.

Learners can expect to gain experience in production management from the initial origination and researching of an idea, through the pitch, to managing a production team or a part of one, taking personal responsibility for the effectiveness of the production process. Learners will develop the ability to play a key part within a production, and will be given opportunities to demonstrate management qualities, individual focus and appropriate collaborative skills needed for a successful production.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to originate, develop and research an idea for a media product	1.1 originate, develop and research an idea for a media product working within appropriate conventions and with some assistance
2 Be able to pitch a proposal for a media product	2.1 pitch a proposal for a media product with some appropriate use of subject terminology and with some assistance
3 Be able to manage a production process to create a media product.	3.1 manage a production process to create a media product working within appropriate conventions and with some assistance.

Unit content

1 Be able to originate, develop and research an idea for a media product

Originate ideas: group and individual brainstorming; analysis of each idea; selection; justification

Develop an idea: mood boards, thumbnails, mock-ups, survey

Constraints: time; costs; personnel; resources; legal and ethical considerations, eg privacy, libel law, defamation, race discrimination law, data protection, freedom of information; codes of practice; copyright (requirement, owner, clearance, cost)

Research an idea: audience research eg age; gender; socio-economic grouping; lifestyle; location; audience figures, eg RAJAR, BARB, ABC, CAA, ELSPA, ChartTrack, MCV; primary content research, eg interviews, questionnaires, own observations; secondary content research, eg newspapers, magazines, books, audio, audio-visual, electronic, internet, archives, libraries; research into competitors, research into market

2 Be able to pitch a proposal for a media product

Proposal: content outline; target audience; resources; personnel requirements, eg cast and crew, team, specialists; budget; project schedule

Pitch: style; format, eg PowerPoint, video presentation, multiple presentation; technology, eg video screen, projector, audio playback; product information (content outline, target audience, resources, cast and crew requirements, budget, project schedule, market fit); preparation of materials; rehearsal of pitch; delivery of pitch

3 Be able to manage a production process to create a media product

Planning: agreed production roles; job allocation; task definitions and deadlines; agreed content outline within proposal; preliminary and regular team meetings; agendas and minutes; proposed schedules; logistics, eg personnel, equipment, locations, additional facilities, additional resources; contingency, eg resources backup; logistics backup; time frame for project maturity risk assessment

Production management: pre-production phase; production phase; post-production phase; project management techniques, eg spreadsheet, dedicated software, agile methods, scrums; team and individual performance; contingency plans for staffing and resources; monitoring and reviewing; problem solving; prioritisation; crisis management; quality control; meeting submission dates; modifications after completion

Product: technical and aesthetic qualities; realisation of proposal; fitness for purpose, eg audience, commissioning organisation or agency, client

Delivery

In this unit, learners will work in teams and will demonstrate production management skills by taking either the lead role in an individual project or a major management role in a group project. In either case, they should take a role which involves managing others. They should be encouraged to research and develop their own ideas for a production and to choose the medium or mediums that they wish to work in. Tutors should ensure that learners' proposals will enable them to create evidence that will demonstrate their management, organisational and communication skills and their understanding of appropriate codes of practice. All members of a team should develop individually their understanding of the specific roles and responsibilities they are undertaking and formulate a personal strategy for fulfilling them.

Learners should research and develop proposals for a production that is achievable within the limits of the resources of the school or college. They should also be encouraged to try to sell their idea to a real organisation or agency if possible as this will afford opportunities for the production to have clearly defined parameters through which the production team can demonstrate their management, organisational and communication skills. Such a scenario, with real prospects for the final product to be used, would provide obvious motivation and a 'professional' context within which learners might demonstrate their talents. That is an ideal situation and it is not always possible to provide situations of this nature but there are often many opportunities for learners to produce media products for other departments within their educational establishment. For example, producing a music video for the music department, a website for the Information Services, a radio show to be broadcast in the college canteen, a newsletter for the Student Union are all ways of providing a genuine work-related context for this unit.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to a range of production management techniques.
Small group work on production management techniques. Learners will: <ul style="list-style-type: none">• identify techniques for planning• identify techniques for ideas development, target audience research, content research, contingency planning and constraints on production• present a group report with individual evidence of contribution to the work.
Assignment 1 – Development of Ideas for a Creative Media Product. Working individually learners will: <ul style="list-style-type: none">• identify the target audience they would like to address• identify the range of resources and materials available to them (audit)• identify the skills they have in relation to their choice of production techniques• mind map a number of appropriate ideas• identify the requirements for production management for each idea• decide which idea might be appropriate• undertake research into appropriate content based on target audience• undertake research into appropriate production techniques• identify potential constraints on production• identify ways to address constraints.
Assignment 2 – Individual Work on Preparing a Pitch. Learners will: <ul style="list-style-type: none">• finalise ideas for their media product• prepare a proposal• prepare presentation including delegate notes, presenters notes• give presentation in the form of a pitch to the teacher and peers• refine ideas as a result of the pitch, where appropriate.

Topics and suggested assignments and activities

Assignment 3 – Production.

Learners will:

- determine production roles (if employing a team or working in a group*)
- complete pre-production process
- complete production process
- complete post-production process
- show rough cut or draft product to focus group (and client if there is one)
- make changes to finished product, where necessary.

* where learners work together on a group project they must take on a production role which enables them to produce evidence that fully addresses all the assessment criteria.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of learning outcome 1 will be provided in documentation such as brainstorming, research data, proposals and treatments, meeting notes, emails, sketches, drafts, thumbnails, mood-boards etc, depending on the nature of the production project envisaged. In the case of a group project all material presented as evidence must be the individual learner's own work. Group produced and photocopied material will not be acceptable.

Evidence for achievement of learning outcome 2 will be the pitch and associated documentation. In the case of a group project each member of the group must present her or his own role and demonstrate what it will contribute to the overall product. The pitch must be recorded for the purposes of internal and external verification.

To demonstrate achievement of learning outcome 3, learners should provide, besides the finished product, a range of evidence showing their management skills and a finished product. Learners must ensure that they record carefully all their activities in production management. This can take the form of production diary, production schedule or production log. Learners should record team meetings, planning meetings, meetings with client and feedback from their tutor. They may also provide appropriate feedback to their team in the form of policy statements, progress reports and various other planning documents relevant to the medium and the industry in which they are operating. Learners should be encouraged to record their own personal development and ability to respond actively to various constraints, contingencies and feedback from other members of the team and the client (if there is one), and to take account of market or target

audience considerations. Learners should take every opportunity to review their work using their team and tutor.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

NB: care must be taken when assessing a group project to ensure that each learner is assessed individually.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will be able to plan, or take a part in planning, a project but these plans will be basic and there will be limited evidence of an understanding of the development process. The skills, resources and personnel required to complete the production and the timescales involved will all be briefly noted. A target audience will be indicated and the learner or group may already have made some contact with a potential purchaser of the final product to investigate the feasibility of the proposal.

2.1: in their pitch learners will provide a description of the proposal in which all relevant aspects of the project (or their part in it if it is a group project) will be covered though not completely. For example, notes on target audiences will be provided but will not be informed by extensive research or understanding of the nature and preferences of the target audience referred to. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it. The overall effect of the pitch will be to convey the proposal and create an impression that it is viable, but not exciting. Ideas for this production will not be developed enough to withstand close questioning.

3.1: learners will demonstrate a basic grasp of personal responsibility, procedures and the requirements of the production process in their particular area of responsibility. Documents produced will indicate obvious procedures and solutions but there will nonetheless be a sense of purpose behind all activity. In the case of a group project, their management role may not have substantially improved the production but it will not have

adversely affected it. The final product will not have realised the learners' full intentions, but the activity that led to it will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it.

1.1 and 3.1: in terms of the imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working.

1.1, 2.1 and 3.1: when engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 — Development of Ideas for a Creative Media Product	Learners will initiate and complete a production project to create a media product developed from one of their own ideas.	Production log detailing: <ul style="list-style-type: none"> the development process, all initial ideas (scripts, sketches, thumbnails, mood-boards etc), all initial research.
2.1	Assignment 2 — Individual Work on Preparing a Pitch	As above.	<ul style="list-style-type: none"> Proposal. Slides, notes and handouts for pitch. Recording of pitch. Tutor observation notes.

Criteria covered	Assignment title	Scenario	Assessment method
3.1	Assignment 3 — Production	As above.	<ul style="list-style-type: none"> • All pre-production and production documentation and records. • Production log. • Tutor observation notes.

Essential resources

Learners will need access to a range of information and materials relating to production management techniques.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Chandler H — *The Game Production Handbook* (Charles River Media, 2006) 978-1934015407

DiZazzo R — *Corporate Media Production*, 2nd Edition (Focal Press, 2003) 978-0240805146

England E and Finney A — *Managing Multimedia: Project Management for Web and Convergent Media, Book 1: People and Processes*, 3rd Edition (Addison Wesley, 2001) 978-0201728989

England E and Finney A — *Managing Multimedia: Project Management for Web and Convergent Media, Book 2: Technical Issues*, 3rd Edition (Addison Wesley, 2001) 978-0321436931

Fraser P and Oram B — *Teaching Digital Video Production* (BFI Education, 2005) 978-0851709772

Hardy P — *Filming on a Microbudget* (Pocket Essentials, 2004) 978-1842433010

Kindem G and Musburger R — *Introduction to Media Production: From Analog to Digital*, 2nd Edition (Focal Press, 2001) 978-0240804088

Laycock R — *Audio Techniques for Television Production* (Focal Press, 2006) 978-0240516462

Maciuba-Koppel D — *The Web Writer's Guide* (Focal Press, 2002)
978-0240804811

Nisbett A — *The Sound Studio: Audio Techniques for Radio, Television, Film and Recording*, 7th Edition (Focal Press, 2003) 978-0240519111

Oriebar J — *Digital Television Production: A Handbook* (Hodder Arnold, 2001) 978-0340763230

Roberts-Breslin J — *Making Media: Foundations of Sound and Image Production* (Focal Press, 2003) 978-0240805023

Rudin R and Ibbotson T — *An Introduction to Journalism: Essential Techniques and Background Knowledge* (Focal Press, 2003)
978-0240516349

Websites

www.allpm.com — a project management site with useful resources

www.gamasutra.com — a sister publication to the print magazine *Game Developer*

www.skillset.org/interactive/careers/article_4754_1.asp — Skillset's pages on the role of a project manager

Unit 16: Critical Approaches to Creative Media Products

Unit code: Y/600/6612

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to develop learners' understanding of how media producers create their products for targeted audiences. It also aims to develop their own critical and personal understanding of these products. Looking at media production from these perspectives will give learners a more focused approach to their own production work.

Unit introduction

The media sector is diverse and continually developing. Across the sector media producers develop distinct products which serve a specific purpose and function. These media products have developed over time in response to changes in society, culture and technology, and, more specifically, in response to changing attitudes within the industry to its audiences, and to changes in the tastes and interests of those audiences. In order to work successfully in any of the media industries it is vital that those entering the sector understand how an industry thinks about its audiences when constructing products and how those products are received by the target audiences. This means being able to think critically about the products others professionals are making or have made.

The unit enables learners to consider the dynamic relationship between media producers and the audience. Learners will explore the way producers think about and target specific audiences, looking at both how producers create products for audiences and how audiences use and respond to those products.

Learners will then look at how meaning is carried by media products by considering how we 'make sense' of them, bearing in mind that there are many ways to approach a media product and many ways to 'read' it. Learners will have the opportunity to think about their own responses to a range of media products using appropriate analytical techniques.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand how media producers define audiences for their products	1.1 describe how media producers define audiences with some appropriate use of subject terminology
2 Understand how media producers create products for specific audiences	2.1 describe how media producers create products for specific audiences with some appropriate use of subject terminology
3 Understand how media audiences respond to media products	3.1 describe how media audiences respond to media products with some appropriate use of subject terminology
4 Be able to develop responses to media products.	4.1 present a descriptive response to a media product with some appropriate use of subject terminology.

Unit content

1 Understand how media producers define audiences for their products

Defining audiences: quantitative audience research, eg BARB, RAJAR, ABC; qualitative audience research, eg focus groups, questionnaires, face-to-face interviews; audience profiling, eg socio-economic status, psychographics, geodemographics, age, gender, sexual orientation, regional identity, mainstream, alternative, niche

2 Understand how media producers create products for specific audiences

Addressing audiences: selection of content, eg words, images, sound, sequences, colours, fonts; construction of content, eg narratives, layout, captions, anchorage; codes and conventions, eg linguistic, visual, audio, symbolic, technical; modes of address

Audience feedback: eg focus groups, audience panels, trialing and testing, reviews, complaints

3 Understand how media audiences respond to media products

Audience theory: hypodermic needle model; uses and gratifications theory; reception study; passive or active consumption

Effects debates: eg effects of exposure to explicit sexual or violent content, effects of advertising, health concerns; censorship debates

Responses: negotiated; preferred; oppositional; participatory; cultural competence; fan culture

4 Be able to develop responses to media products

Critical approaches: eg content analysis, semiotic analysis, structuralism,

Genre: according to production technology eg film, video, audio, print, digital; distribution method, eg television, cinema, radio, internet, CD, iPod, mobile phone, home computer, hand-held consoles; generic codes and conventions (content, style, symbolic, cultural, technical); changes over time, eg in audience, ideological shifts, re-definition, obsolescence, spoof, pastiche, parody

Narrative structures: narrative, eg single strand, multi-strand, closed, open, linear, nonlinear; alternative narrative; enigma; climax; equilibrium

Representation: negative; positive; of social groups; of social issues; stereotyping; presence and absence

Delivery

When teaching this unit, tutors may choose to focus on media products from various industries or on products from one industry. This will depend on factors such as the programme being followed, resources and tutor expertise. Where the programme is based upon an endorsed title (or pathway) the unit ideally should be contextualised within that endorsed title in such a way that the content covered reflects the production work that learners are engaged in.

The purpose of this unit is to enable learners to understand how media producers construct and target their range of products at specific audiences. In addition, learners will develop a range of critical strategies for responding to these media products and making sense of their meaning, whilst at the same time being able to explain how other readers in the audience might be responding to or using these products. The extent and range of critical strategies will vary, depending on the industry and its products and to some extent on learners' previous knowledge and understanding of the media. Whatever the range, it is essential that learners understand the dynamic between producers, the media product and the audience, so it is here where the focus of the teaching should lie.

Teaching of this unit should take place in a context which helps learners to think like media professionals. A range of scenarios, role plays, mock interviews and group or team based approaches can encourage this. It is also valuable to establish contact with media professionals. This might be links with local or national media organisations which provide opportunities for visits. However, as it is often difficult to take large groups out it might be easier to ask media professionals to speak to groups of learners in the classroom, focusing specifically on the relationship between production and consumption within their industry and about targeting particular audiences.

The content associated with learning outcome 1 might best be presented to learners directly by the tutor, this being followed up with small research projects to gather information about audiences in terms of various categories, or to construct audience profiles for given products.

To work on learning outcome 2, learners might undertake a case study of two differing products, one which has been produced by a small independent company, ideally with a niche or alternative audience, and another within the commercial mainstream. For example, it might be useful to take a high budget film produced in Hollywood by a leading film production company and compare it to low budget production by an independent or alternative film maker or a radio documentary and a BBC Radio 5 Live sports feature. Learners should consider in their groups how the different producers constructed their products for their specific

audiences, and how those audiences are addressed or interpellated by the products. Learners should consider such things as the social and economic status, the ages, the geographical locations, and the interests and lifestyles of the targeted audience.

Work for learning outcome 3 can involve fieldwork. Surveys, questionnaires and focus groups based around specific examples of media programmes and products can prove useful when looking at the effects debate.

Work on learning outcome 4 should present learners with opportunities to engage with a range of texts either within a chosen industry or across the sector. Learners can work in pairs to evaluate the usefulness of a particular analytical strategy such as a semiotic reading approach. Each pair should be directed towards applying their reading approach to different media products. For instance, where the programme is not based around a specified pathway, different pairs could be given a radio drama, the front cover of a computer magazine, a computer game, a film trailer, the title sequence of a popular television sitcom or a soap opera. Within a programme that is following an endorsed title, care should be taken to ensure that the groups each have a different kind of product for example, in a Games Development programme, a children's computer game, an educational computer game, and a mobile phone game.

Learners should be given the same questions to work through before bringing the pairs back to a whole class discussion. During these whole group sessions learners can begin to consider and debate their own responses to the products they have analysed. Both the pair presentations and the whole group discussion must be recorded so that individual learners have evidence of the work they have done in their own portfolios.

Learning outcome 4 requires learners to work on media genres. At this level, it is important that learners understand how genres are constructed with their recognisable codes, narrative structures and representations. This might be better achieved through the study of one genre in a given medium rather than by covering several, as the latter approach might well result in superficial work.

Leading from the sessions around audiences, learners should consider their own expectations as media audiences of a given genre. Class discussions and debates about learners' own consumption tastes and patterns can develop and generate an interesting class profile and will begin to address most of the unit content around media audiences.

Alternatively a group might work around a range of television genres with pairs of learners considering what audiences expect of soaps, reality television, sitcoms and television documentaries. They might look at how characters are created on-air in radio through the codes and conventions of specific genres such as soaps, one-off dramas, or book readings. Learners can then go on to use these ideas to generate a list of codes and conventions and what purpose the genre has for its intended audience. In this way learners begin to understand how one genre is defined and what makes it distinctive from other genres.

These sessions can then lead to a sustained focus on how genres develop over time. Approaches may vary depending on whether learners are approaching the unit outcome from the perspective of one media sector, or from several. The class might break up into different groups in order to work on a specific genre. All groups will work towards understanding the codes and conventions of their identified genre, the audience and purpose of the genre and how the genre has changed over a period of time. Learners need to know that genres are dynamic and constantly redefine themselves to find new audiences and remain relevant. There is scope to consider how genres merge, cross fertilise and use parody and pastiche.

Where learners are focusing on more than one sector, they could consider how a particular genre works across several mediums. For example, group work can develop an understanding of the horror genre in comics and periodicals, television and also film. This group work can take the form of annotated sketchbooks with examples of media products, storyboards with detailed annotations of camera angles, scripts with aspects of narrative structure and representation written in, or tasks around proposals and treatments in response to briefs or commissions all of which will encourage engagement with issues of media genres in an industrial context.

Learners should consider narrative insofar as it allows them to engage with the codes and conventions of their chosen genre. A study of different film genres will touch upon the distinct narrative structures which determine the genre. Consideration of narrative could ask questions about why, on the one hand, some television genres are developing very similar narrative codes whilst on the other, some are evolving into such hybrid genres as the docusoap and the docudrama. An understanding of how narrative works in the codes and conventions of magazines will consider the extent to which certain features such as 'letters to the editor,' the 'problem page' and single articles develop particular narrative structures.

Learners should focus on representational issues depending on the media product they are analysing for example, the various representations of 'masculinity' found in men's lifestyle magazines. Forming an understanding of changing representations of characters and issues in television sitcoms and soaps is also useful in approaching questions about the redevelopment and redefinitions of representations. Other examples are women in film noir, youth in soaps, short films and sitcoms, celebrities in newspapers and magazines, and the 'ordinary person' in reality television. Games and interactive media are a new arena for understanding representation and learners could consider issues such as how gender is constructed and represented, who is present or absent, and who is positively and who negatively represented within the narrative of a large-scale computer game.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities

Introduction to the unit and unit assessment.

Introduction to audience research:

- quantitative audience research (audience ratings and measurement panels)
- qualitative audience research (focus groups, questionnaires, face-to-face interviews)
- audience classifications (socio economic, psychographics, mainstream, alternative, niche).

Group then analyse own television viewing habits and lifestyles (using questionnaires) and summarise data gathered.

Assignment 1 – Defining Media Audiences.

Working in groups of three learners will apply above audience research methods to a film in order to identify the audience:

- group gathers statistical data on product
- group prepares to apply the three research methods to the product
- group applies research methods
- each learner individually collates and analyses information gathered from each method
- group meets to compare results
- individually learners prepare a presentation explaining
 - how methods have been used to research audiences for the product
 - conclusions of research (defining audiences in terms of given classifications)
 - correlation between quantitative and qualitative information
 - how successful her/his method was compared with others
- learners give presentations.

Introduction to construction of media products for specific audiences through class analysis of a magazine's codes and conventions:

- selection of content (words, images, colours, fonts)
- construction of content (narratives, layout, captions, anchorage)
- codes and conventions (linguistic, visual, symbolic) (two sessions)
- modes of address.

Topics and suggested assignments and activities

Assignment 2 – Analysis of Media Products and Relationship of Products to Audiences.

Learners will apply above analysis methods as a group to a lifestyle magazine and test against audience responses to the magazine; produce an individual report:

- analyse construction of magazine
- construct questionnaire on audience responses to magazine
- apply questionnaire
- collate and analyse information gathered
- produce report.

Introduction to theories of audience responses to media:

- audience theory (passive or active consumption, hypodermic needle model, uses and gratifications theory) (two sessions)
- responses (negotiated, preferred, oppositional, participatory)
- effects debates (effects of exposure to explicit sexual or violent content, effects of advertising).

Assignment 3 – Audience Response and Behaviour.

Learners will research effects of 'shoot-em-up' computer games on 16-18-year-olds:

- read relevant background literature handouts
- construct a questionnaire to test it
- apply questionnaire
- collate and analyse information gathered
- prepare presentation
- write article for a fanzine on effects of 'shoot-em-up' games on 16-18 year olds.

Introduction to analysis of computer games through group discussions and classroom analysis of games:

- critical approaches (content analysis, oppositional analysis) (two sessions)
- genre (production technology; distribution method, generic codes and conventions)
- narrative (closed, open, linear, nonlinear, enigma, climax)
- representation (stereotyping, presence and absence of social groups)
- learners identify genres of computer games through cataloguing them into a grid based on genre characteristics.

Topics and suggested assignments and activities

Assignment 4 – Analysis of a Category of Computer Game.

Learners will write a critical article on chosen category of game for a games magazine:

- select appropriate games for analysis
- play games critically, taking notes
- analyse genre characteristics
- analyse narrative structures
- analyse representation of characters
- write article.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence of achievement of all four learning outcomes can be presented in similar ways — reports, presentations, structured audio or audio-visual statements, video or audio diaries, personal websites and recordings of discussions, group work, and class debates. There is also scope for learners to keep detailed diaries and logs of interviews and meetings with professionals cross-referenced to specific tasks around the criteria. Presentations must be recorded for the purposes of internal and external verification.

Supporting evidence for the achievement of learning outcome 4 could be provided through the application of the codes and conventions of a genre in a practical context, such as storyboards, front covers or posters with annotations, or other larger media products.

It is also vital that when the practical approach is taken, evidence is clearly labelled to relate it to the assignment it derives from and it must be supported by documentation which indicates clearly where individual learners are reaching the criteria and at what level they are reaching them. Learners must be able to support their production activity with some sort of verbal elaboration, whether written or oral. It is important to remember that this is not a production or technical unit, but one in which the emphasis is on developing critical approaches and skills. Learners must, therefore, be given opportunities to articulate their ideas and understanding in some form. If evidence derives from conversations between a tutor (or assessor) and the learner the conversations must be recorded in audio or audio-visual form, or in writing. If the tutor's assessment is recorded in writing (as witness or observation reports) care must be taken to ensure that at least 50 per cent of such assessments are subject to internal verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification.

NB: tutors should remember that whilst this unit lends itself to group work, any materials intended as evidence for assessment must be clearly the work of the individual learner who submits it.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will provide basic descriptions of media audiences for specific products using the terminology of audience categorisation with some uncertainty and will describe or apply at a basic level methods used by media organisations to gather information about these audiences and to construct profiles of them.

2.1: learners will correctly describe aspects of media products which address a specific audience, and they will also correctly define that audience, albeit without detail. They will not, however, be able to show how or why the aspects described are specific to the audience defined, relying rather on unsupported assertions such as, 'The formal type of language used in *The Independent* appeals to middle-aged, well educated people of social groups A and B.'

3.1: learners will be able to outline correctly the major audience theories (for example, the hypodermic needle model and uses and gratifications theory) but they will not apply them to specific texts with any certainty. They will correctly describe some work done on effects of the media, but any attempts to theorise effects or draw conclusions about how to deal with what are perceived as ill effects will rely on simple, unsupported assertions such as, 'Advertisers know that their adverts have the effect of increasing sales or they wouldn't waste their money on it, so I think advertising junk food to children should be banned.'

4.1: learners will outline reasonable but simple responses to specific texts employing some recognisable critical methodology. They will correctly describe the main codes and conventions of a genre and will make some attempt to address narrative and representation but they will not link these to the audience or to specific examples from the texts considered. Typically learners will be least successful when dealing with narrative conventions,

and explorations of representational issues will not go beyond unsupported assertions or statements. There will be no detailed exemplification from the texts and no support for opinions, which will remain at the level of assertion.

1.1, 2.1, 3.1 and 4.1: any exemplification offered will be highly generalised (for example, a film, computer game, television programme or newspaper will be cited without any detail being picked out). Evidence will show a basic understanding of subject-specific terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Applying Audience Research Methods	Learners conduct research to identify audience of a product for a media research company and on how well the product has been made for that audience.	<ul style="list-style-type: none"> • All preparatory documentation. • All research data and information. • Notes on group meeting. • Presentation slides and notes. • Recording of presentation.
2.1	Assignment 2 – Analysis of Media Products and Relationship of Products to Audiences	As above.	<ul style="list-style-type: none"> • Analysis of product. • Questionnaire. • Collated results from questionnaire. • Report.
3.1	Assignment 3 – Audience Response and Behaviour	Learners write an article for a computer fanzine.	<ul style="list-style-type: none"> • Questionnaire. • Collated results from questionnaire. • Finished article.

Criteria covered	Assignment title	Scenario	Assessment method
4.1	Assignment 4 – Analysis of a Category of Computer Game	As above.	<ul style="list-style-type: none"> • All notes on game-play. • All notes on analysis of games. • Finished article.

Essential resources

Centres should develop their own library of resources to include, print, audio, moving image, interactive media products and computer games as appropriate to their programme.

Indicative resource materials

Textbooks

Abercrombie N, Longhurst B — *The Penguin Dictionary of Media Studies* (Penguin 2007) 978-0141014272

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Baylis P, Holmes P, Starkey G — *BTEC National in Media Production* (Heinemann Educational 2007) 978-0435499198

Branston G, Stafford R — *The Media Students Book* (Routledge 2006) 978-0415371438

Briggs A, Cobley P — *The Media: An Introduction* (Longman; 2002) 978-0582423466

Clark V, Jones P, Malyszko B, Wharton D — *Complete A-Z Media and Film Studies Handbook* (Hodder Arnold 2007) 978-0340872659

Gillespie M, Toyne J — *Analysing Media Texts Issues in Cultural/Media Studies* (Open University Press; 2006) 978-0335218868

McDonald K — *Film and Television Textual Analysis* (Auteur, 2005) 978-1903663547

O'Sullivan T Dutton B, Rayner P — *Studying the Media: An Introduction* (Hodder Arnold; 2003) 978-0340807651

Taylor L, Andrew W — *Media Studies: Texts, Institutions and Audiences* (Wiley Blackwell 1999) 978-0631200277

Websites

www.asa.org.uk — the Advertising Standards Authority

www.barb.co.uk— Broadcasters Audience Research Board

www.bbfc.co.uk — the British Board of Film Classification

www.englishandmedia.co.uk/mediamag.html — the English and Media Centre

www.imdb.com — a movie database

www.mediaknowall.com — a web guide for media students

www.mediawatchuk.org — campaign for accountability and decency in the media

www.ofcom.org.uk — the regulator of the UK's broadcasting, telecommunications and wireless communications industries

www.rajar.co.uk — official body in charge of measuring radio audiences in the UK

www.vlv.org.uk — the Voice of the Listener and Viewer

Unit 17: Designing Idents for Television

Unit code: D/600/6613

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop understanding of and skills in the design and production of on-screen graphics and idents for television using the appropriate technologies of image manipulation and production.

Unit introduction

Recently the nature of television production and broadcasting has evolved at a rapid pace. The expansion of cable, satellite and digital television broadcasting has led to a growth in the number of television channels as well as the amount of televisual content required by the new multi-channel industry.

In this ever-expanding market, the corporate identity of television production and broadcasting companies is perhaps more vital than ever. With viewers offered such a vast choice, it is of utmost importance to ensure that the look and tone of all on-screen content is instantly recognisable and appealing to a target audience.

Within the industry, there is a great demand for individuals with both the imaginative understanding to work with a company's image and the technical ability to realise their needs. The power of a unified on-screen image is well recognised and opportunities for specialist freelance and in-house designers are wide-ranging.

Whilst idents usually contain audio and visual content, this unit, in order to hone learner understanding, deals solely with the visual aspect of such creations.

This unit introduces learners to the professional techniques for the creative design and effective production of on-screen graphics and idents for television. It includes aesthetic and technical challenges in television, the needs of the viewer, the creative negotiation of a brief, team roles and related skills. In addition, the unit provides an opportunity to research the potential of the relevant technologies of image manipulation and production.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the design and purpose of television idents	1.1 describe the design and purpose of television idents with some appropriate use of subject terminology
2 Understand the opportunities and limitations of on-screen graphic representation	2.1 describe opportunities and limitations of onscreen graphic representation with some appropriate use of subject terminology
3 Be able to originate and plan television idents to a brief	3.1 originate and plan television idents to a brief working within appropriate conventions and with some assistance
4 Be able to produce a television ident to a brief.	4.1 produce a television ident to a brief working within appropriate conventions with some assistance.

Unit content

1 Understand the design and purpose of television idents

Design: density of information; space and time; screen tempo; interaction with viewers; information-led; entertainment-led

Purpose: identity; branding; marketing; packaging and re-packaging; scheduling; segmentation within scheduling

2 Understand the opportunities and limitations of on-screen graphic representation

Opportunities: creation of corporate identity; display of text-based information; branding of content; creation of tone; appeal to target audience; incitement of brand loyalty

Limitations: typography; resolution; colour; size; aspect-ratio; analogue and digital recording and transmission systems

Creative communication: enhancing ideas; pushing the technology; communicating visual ideas to a non-visual audience; creating under pressure of time and budget; appealing to a target audience; appreciation of desired tone

3 Be able to originate and plan television idents to a brief

Planning: production budget; timescales; management and roles; production paperwork; working for a client

Design development: storyboarding; timing animation sequences; expansion or reduction of concept to form a suite of idents

4 Be able to produce a television ident to a brief

Concepts and applications: 2D animation; 3D animation; stop motion; layering

Digital editing: editing software; memory; file formats

Production management: scheduling; meeting deadlines; management of resources; working to the client's brief; liaison with clients; client negotiation; quality management; team working; presentations

Professionalism: meeting deadlines; quality management; team working; effective presentation of ideas

Delivery

Coverage of this unit should centre on learners' analysis of the nature and purpose of existing idents, followed by exploration and practice based on their findings. Initiating discussion through brainstorms detailing learners' conception of idents and their purpose may be helpful. These sessions can be followed by group viewings and analysis of existing products. Some coverage of broader marketing techniques (such as corporate identity theories) may be useful to assist learners in understanding the promotional purposes of idents.

The case studies available on some websites may be useful for studying the notions behind ident design and the manner in which professional companies operate. Learners may evidence their progress in this element of the unit through the creation of a research portfolio, audio or video diary or perhaps an online blog. To ensure that opportunities to achieve up to distinction level are included, discussion should be encouraged to progress beyond simple identification of how idents are produced towards why they are used and their relative successes. Learners must ensure that any research work collected is analysed and annotated or commented upon as unsupported research material cannot be expected to achieve a pass level.

Careful consideration of the limitations faced by ident designers should also be evidenced. The viewing of idents followed by examples of their usage could be helpful to learners when discussing what this might involve. Viewing of a suite of idents and their placing (for example, during continuity announcements, before an advert break or as an on-screen presence during broadcast) may assist learners in understanding how the varied usage of such graphics can determine their nature. Analysis of different channel and programme idents may be helpful in evaluating their quality or success.

Through debate, learners should gain a good understanding of the need to appreciate and work towards targeting a particular audience. The selection of idents aimed at a minimum of two very disparate audiences would be advisable for this purpose. Drawing out comment surrounding the choice of elements such as colour, font, imagery, motion and composition through discussion, analysis and investigation will allow learners to grasp fully the importance of taking the audience into account.

Working to a client brief is an important part of work in this vocational area and this unit. Learners must understand the need for professionalism when dealing with a client and the demands of fulfilling their needs. Giving learners examples of completed documentation to guide them towards providing professional standard paperwork and preparation materials may be advisable. Centres should also provide forms for learners to use for standard documentation.

Putting the knowledge gained through investigation will allow learners to consolidate their understanding and gain experience of producing products effectively. Working to a brief will allow learners to understand the demands involved and assist in shaping and formulating their conceptual development.

It is unlikely that learners will be able to work on an actual brief for a live project, though they might be able to do work linked to a production taking place in the centre or as part of a corporate or promotional programme with a real client. However, contacts in the industry could provide examples of real briefs which could be used within the centre. Alternatively, tutors can construct briefs for a fictional client, or negotiate them with learners.

Setting a brief from a fictional client would allow some control over the nature of learner ideas and be useful for learners, who can then benefit from 'client' interaction with a tutor. For example, proposing a re-branding of an existing channel or company will enable them to investigate an existing target audience and possibly use understanding gained from analysis to improve or re-focus an approach. Idea generation and production planning should be clearly evidenced in order to fulfil criteria and should assist learners in carefully honing their ideas before moving on to production. Learners should be made aware, in particular, of the current trend for a series of idents produced on a particular theme. They will be required to generate several ideas for idents within a particular suite, although they will only go on to produce a single example from this range.

When moving on to the production element of the unit, learners must show that they have gone through appropriate stages of development to reach the formulation stage. Progress through the production of idents, in whatever form, must be carefully documented to ensure appropriate evidence is produced. The completion of a production log or diary in audio, visual or text formats would be highly effective for this task, particularly if supplemented with learner-annotated screen-grabs of work in progress. Detailed explanation from learners regarding the methods employed in their work, along with comprehensive logging of progress and tutor observations, will assist in evidencing independent work. Learners should be encouraged to discuss at all times, both with friends and tutors, their decision-making processes and the reasoning behind their creative progression.

The practical formulation of idents could be completed using traditional animation techniques such as stop-motion film or using digital technologies and working on multimedia authoring software, video editing packages or digital animation suites. This may be initiated through workshop-based investigative or training sessions, or follow on from previous units based on the utilisation of such technology. To enable learners to reach the 'independent' requirements of the grading criteria, it may be advisable to provide written guidance on the utilisation of such equipment in order to allow individual experimentation and development. Learners should be encouraged to consider the multiple uses of idents and how an idea may be adapted, though they are required by the unit to produce only one version of their chosen ident. It would be appropriate for learners to choose a motion version of their design, mirroring current industry practice.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
What is an ident? Tutor-led discussion on the purpose and nature of idents within the television industry... with some coverage of broader marketing techniques (such as corporate identity theories) and the promotional purposes of idents.
Group screenings of idents and small group deconstruction of purpose and nature of given ident highlighting persuasive, aspirational, informative elements of design.
Individual learner research into a chosen ident – seeking out information about concept intended by designers, use in products, deconstruction of nature of design.
Assignment 1 – The Purpose and Nature of Ident Design. Learners will individually prepare presentations explaining their findings from investigating the purpose and design of idents They will include a range of examples of idents and explanations of how they support the points made.
Tutor led discussion of the limitations of the ident and the challenges faced by designers with case studies of successful and less successful ident designs.
Paired activity analysing and existing example of an ident and evaluating its strengths and weaknesses, suggesting how improvements could be made.
Visiting lecture from current designer or producer of idents discussing the challenges faced. Learners to complete a quiz sheet based on information gathered.
Assignment 2 – Successes and Failures in On-screen Graphics. Learners will: <ul style="list-style-type: none">• investigate examples of successes and failures in existing ident products• write up their findings as an illustrated report.

Topics and suggested assignments and activities

Assignment 3 – Launch of Brief for Client: Designing a Suite of Idents.

Learners will:

- begin investigation into target audience identified and existing products
- generate a theme and initial ideas for a suite of idents
- produce storyboards for proposed idents and pre-production documentation for the project
- prepare a pitch and proposal to a 'client'
- present pitch
- document decision making process through entries into a progress blog.

Assignment 4 – Creating an Ident.

Learners will:

- select one ident from the suite and begin work on producing it according to their plans
- document progress and alterations made to plans in their blogs.

Presentation of completed ident for peer and tutor feedback.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcomes 1 and 2 may take many forms, including a written report, an annotated portfolio, an individual presentation, a contribution to a group discussion (recorded or witnessed via a tutor observation), a blog or a progress diary. It would not, for this unit, be appropriate to award on the basis of implicit understanding evident in practical work. Presentations must be recorded for the purposes of internal and external verification. If assessments based on conversations are recorded in writing (as witness or observation reports) care must be taken to ensure that at least 50 per cent of such assessments are subject to internal verification.

For some learners, a formal viva voce might be appropriate for assessing achievement of learning outcomes 1 and 2. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Learning outcomes 3 and 4 are based largely on the application of learner understanding in response to a brief and should be informed by the

understanding and knowledge gained from achieving the first two outcomes. Whether the brief is from an outside source, tutor formulated, or negotiated between the tutor and the learner, it should be clear from the evidence submitted that learners are aware of the brief and its requirements.

Achievement of learning outcome 3 could be evidenced in the form of a portfolio of development and planning materials containing things such as idea generation materials and production documents. For learning outcome 4, evidence would take the form of a resolved practical product submitted in an appropriate format such as a DVD or Mini-DV tape.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will provide accurate and relevant descriptions of the design and purpose of a number of idents. The quantity of idents referred to may be balanced against the fullness of the description. Thus 10 briefly described idents may demonstrate as much understanding as three more fully described examples. Whatever is being dealt with will be covered substantially — though not necessarily absolutely completely. A learner might comment, for example, 'Idents are used to tell people what channel they are watching.' This is a correct identification of one of the purposes of idents without any further attempts to explain the reasons for it.

2.1: learners will describe accurately and relevantly some opportunities and limitations of on-screen graphic representation. A grasp of the opportunities offered by the employment of idents will be evidenced but this may be limited and will not be explored in depth. Whatever is being dealt with will be covered substantially — though not necessarily absolutely completely. A learner might note, for example, 'Those creating idents need to be careful what colours are chosen for their designs.' This evidences knowledge of one of the limitations of ident design but not an understanding of the implications.

1.1 and 2.1: examples of idents will obviously be referred to, but descriptions will not be further exemplified by reference to details or elements of these examples. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

3.1: learners will generate some basic ideas for a series of idents on a chosen theme suitable for purpose. Their ideas may lack originality or flair but should show that they understand the concept of a suite of idents and fit for their given purpose. Their planning documentation may be quite brief and lacking in detail but should demonstrate that they are aware of the purpose of such activities and complete them to a level that means they can work on the next stage of their project with plans in place.

4.1: learners will show an ability to produce a finished product fulfilling the basic requirements of an ident. Their work will not be highly original but will show their skills in applying their understanding of industry practice. Learners will have achieved something which will not fully realise what was intended, but the activity that led to it will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it.

3.1 and 4.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the context within which they are working. When engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – The Purpose and Nature of Ident Design	Brief to produce a PowerPoint presentation explaining the purpose and design of idents within televisual content as a teaching aid for next year’s cohort of learners.	<ul style="list-style-type: none"> Printed PowerPoint slides. Portfolio of notes and cue cards for presentation. Record of presentation. Tutor observation sheet.
2.1	Assignment 2 – Successes and Failures in Onscreen Graphics	Brief to explain the opportunities that using onscreen graphics as idents bring to broadcasters and producers. To be used on the website of a company that produces idents.	<ul style="list-style-type: none"> All research notes. Written report with illustrative images.

Criteria covered	Assignment title	Scenario	Assessment method
3.1	Assignment 3 – Launch of Brief for Client: Designing a Suite of Idents	Brief given for a fictional client – a new digital TV channel, The Grid, due to launch next year. They have identified their target audience of 18-30-year-olds and are aiming to broadcast a mix of music videos, imported American sitcoms and youth orientated chat shows.	<ul style="list-style-type: none"> • Pre-production portfolio. • Written proposal. • All notes and preparatory material for pitch. • Recording of pitch. • Tutor observation form. • Commentary on decision-making process on blog.
4.1	Assignment 4 – Creating an Ident	As above.	<ul style="list-style-type: none"> • All production documentation and preparatory materials. • Completed ident, presented in an appropriate medium. • Commentary on changes to plans or proposed ideas in blog.

Essential resources

Centres will need to be able to provide learners with a variety of examples of idents both in static and motion forms. Access to internet resources would be advisable, particularly for the investigation of past practice.

Facilities to enable the completion of moving image products (largely animation) will be needed. Whilst it is unlikely, given the industry, that large amounts of self-sourced material will be employed, this eventuality should be provided for. Editing suites and associated software, high-specification PCs with digital animation or multimedia authoring software or stop-motion video production facilities should be provided.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Cullen C — *Identity Solutions* (Writer's Digest Books, 2003) 978-1581804072

English M — *Designing Identity* (Rockport Publishers, 2000) 978-1564966803

Knapp P — *Designing Corporate Identity: Graphic Design as a Business Strategy* (Rockport, 2001) 978-1564967978

Lambie-Nairn M — *Brand Identity for Television: With Knobs On* (Phaidon, 1997) 978-0714834474

McDowell W — *Branding TV: Principles and Practices* (Focal Press, 2005) 978-0240807539

Websites

www.idents.tv/blog — this site has streaming video of TV idents from around the world, including many UK channels

www.lambie-nairn.com — the website of the creators of several ident campaigns for TV stations which features a number of detailed case studies; of particular interest may be their work on building a corporate identity for and re-branding of BBC One

www.transdiffusion.org/emc/ident — this site has an archive of idents past and present, some analysis of ident design and comment on contemporary idents and their usage

Unit 18: Digital Communication

Unit code: M/600/6616

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to provide learners with an understanding of modern digital systems of communicating, both person-to-person and to a wider audience. Learners are expected to use a variety of modern digital messaging techniques, and to prepare pages for a small website.

Unit introduction

Businesses and individuals are developing new ways of communicating through instant messaging, voiceover internet protocol (VoIP) and weblogs (blogs). The internet is no longer limited to the desktop: millions of users access web pages through mobile devices (such as mobile phones and personal digital assistants). Large corporations, small or even home-based companies all find websites and modern communication tools essential. Personal communication in this day and age demands at least the ability to use email plus an easy familiarity with mobile phone text messaging. The popularity of voiceover-internet both at home and in commerce is growing hugely.

A wide range of digital communication systems is now available and an understanding of their function and the devices required for their operation will allow learners to become confident and efficient communicators in future employment. The practice of modern communication techniques will allow learners to develop an insight into how these methods can be used creatively to transmit information and thoughts rapidly to audiences across the world.

An understanding of the means by which web pages are created for different purposes, published and hosted will enable learners to contribute effectively to the digital presence of future employers.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand digital communication systems	1.1	describe protocols, devices and methods used in digital communication systems with some appropriate use of subject terminology
2	Be able to use digital communication techniques	2.1	use digital communication systems with some assistance
3	Be able to produce a website.	3.1	produce a website with some assistance.

Unit content

1 Understand digital communication systems

Communication protocols: worldwide web consortium (W3C); wireless access protocol (wap); global system for mobile (gsm); 3rd generation protocols (3g); multimedia message service (mms); general packet radio service (GPRS); Bluetooth; broadband (ADSL and cable); voiceover internet protocol (VoIP)

Methods: email; instant messaging (IM); short messaging system (SMS); multimedia messaging system (MMS); internet; bulletin boards; discussion forums; weblogs (blogs); newsgroups; internet telephony; conferencing (video conferencing, audio conferencing); conferencing via virtual communities, eg MMRPGs, Second Life

internet services: worldwide web (www); internet service providers (ISP); uniform resource locator (URL); domain name; top level domain; domain name registration; hosting

Web 2.0: social networking; information sharing; adding content, eg videos to YouTube, SketchUp models to Google Earth; tagging content

Appropriate language conventions: methods, eg web pages, email, texting, messaging; purposes (business, personal)

2 Be able to use digital communication techniques

Messaging systems: email; instant messaging (IM), eg Windows Live Messenger, MSN, AOL Instant Messenger (AIM), Google Talk; short messaging system (SMS) from mobiles and PCs; multimedia messaging system (MMS)

Web 2.0 communities: discussion forums; wikis; blogs; virtual learning environments (VLE); social networking, eg Facebook, Twitter; information sharing, eg Flickr, YouTube

Conferencing: audio conferencing; voiceover internet protocol (VoIP); videoconferencing; conferencing via virtual communities, eg MMRPGs, Second Life

Devices: wireless handheld devices (mobile phone, personal digital assistant, ipods); webcam; headsets; Bluetooth devices, eg laptops, mobile phones, headsets, Wiimotes; conferencing software, eg Netmeeting, Skype, GoogleTalk; games consoles, eg XboxLive, Wii Speak

3 Be able to produce a website

Purpose: audience; device considerations (PC, mobile device, browser software)

Content: eg text, images, animation, video, sounds, music, Web 2.0 content (social networking, information sharing)

Plan: page layout sketches (page design briefs, storyboards); site map; legal and ethical considerations; copyright permissions

Structure: site structure, eg index page, linked content pages; page layout, eg consistency, heading style, body style, colour scheme; folder management (images subfolder); page naming conventions; template; style sheets; hyperlinks; page structure, eg head, body, metatags

Software: hypertext markup language (HTML); cascading style sheets (css); text editor, eg Notepad; visual editor, eg Dreamweaver

Testing: accessibility; code; link; spelling; preview; documented test results

Upload: file transfer protocol (FTP)

Reflective practice: finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities, content, style); production skills; ideas generation; planning; preparation; workflow and time management; technical competence; project management; monitoring work in progress; creative ability; own work; teamwork ; self-evaluation; comments from others, eg audience, peers, tutors, client; documentation, eg notes, sketches, storyboards, production logs

Delivery

This unit gives learners an insight into modern digital communication methods, both personal and corporate. Successful teaching of the unit requires a blend of tutor-led lectures and practical sessions and individual learner research and reading. Research will include using the internet as well as making extensive use of a range of communication systems. Learners will need to compose, send and receive messages using all techniques specified in the unit content. Centres are advised to ensure their network system permissions will allow such use by learners.

The study of protocols, devices and methods covered by learning outcome 1 might be interspersed with the practical composition, sending and receipt of messages covered by learning outcome 2. Learners could record such activities as participation in conferencing and active contribution to an online community in a blog or wiki. This could lead naturally to their study of internet services and Web 2.0 which can be implemented in their production of a website.

Discussion of protocols might be taught through tutor-led lecture and directed personal research, but wherever possible it is expected that learners will be given the opportunity to use a wide range of the digital messaging systems available, including text-based, audio and video. Consideration must be given as to the language conventions appropriate to the purpose of the communication. While 'CU L8r' might be an accepted convention for a personal text to a friend, it would not be acceptable in most circumstances in a formal business email.

Tutors could use email to communicate group instructions to learners who could respond with messages including attachments of assessment work. Tutors could make their classes into local 'learning communities' to encourage and control messaging between their learners. Some lecture material could be provided only via the messaging systems and occasional lectures could be given through conferencing at mutually agreed times, perhaps by guest lecturers speaking from a remote address. Learners could themselves make remote presentations using conferencing facilities, where 'remote' might be understood to be a neighbouring classroom, although this also lends itself to the possibility of cooperation between centres. Learners could be encouraged to reserve email folders for archival recording of their email use, and could record their VoIP and conferencing activity using screen and audio capture software. Personal learning logs could be stored within a blog on a learner's personal file area, and a class group could contribute to a locally held wiki explaining media topics. This practical sharing of knowledge across a localised learning community could lead to a better understanding of how online communities operate globally.

Some centres may be able to make web space available where learners can publish their websites, but all learners should investigate providers of web space for commercial entities, and examine their rules. Some learners may choose to request free web space and may wish to upload their website pages for family and peers to comment on. Centres may need to investigate permissions for using file transfer protocol to upload learner site content to free hosts, though many such ISPs provide their own web-based transfer methods. Additionally, as many centres employ surf-control software, it may be necessary to investigate whether free web space providers are permitted.

Most centres will wish to use web page editing software to help learners prepare their web pages, but even where such software use is planned, a simple and brief exploration of basic HTML codes is recommended. This will permit the discussion of the structure of a web page and will clarify the purpose of the editing software. The study of code can often begin by viewing the source of existing web pages before continuing to prepare trial pages in a text editor for upload to the browser. Use of the text editor can focus attention on the function of the HTML before further study and web page production using web-editing software. Some thought should also be given to the devices on which the pages are likely to be viewed and the difference between creating a web page to be viewed on a PC and on a mobile device.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Lectures, class discussions and learner exploration of: <ul style="list-style-type: none">• text-based communication systems and language conventions• video and audio-based communication systems• Web 2.0 devices.
Practical sessions using communications systems.
Lecture and research on website protocols.

Topics and suggested assignments and activities

Assignment 1 – Digital Communications Systems.

Learners will contribute to a Virtual Learning Environment explaining and demonstrating uses of digital communication systems.

Learners must provide:

- information on protocols, devices and methods
- evidence of use of systems, eg diary of use, video recording of webcam conversations, screenshots of usage etc.

Building skills in use of web authoring tools:

- creating content
- site structure
- software
- testing.

Introduction to (or review of) ideas generation and planning.

Assignment 2 – Website Promoting a Film Club.

Learners will:

- consider and interpret the brief
- generate and record ideas
- find suitable assets and document their locations
- consider the legal and ethical implications of their proposed work
- carry out planning activities prior to production
- undertake production workshop sessions following their planned ideas
- test and improve a draft version
- publish the website
- present work to peers
- compile a development blog evidencing their creative work and reviewing their own website.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of learning outcomes 1 and 2 is likely to be in the form of a blog or wiki though evidence of the learner's use of communication systems could also be a paper-based portfolio of emails and message transcripts, video or audio recordings of learners using the devices or recordings from screen.

It is expected that learners will be given the opportunity to experience the use of a wide range of the digital messaging systems available. As a minimum, learners should show evidence of use of text-based digital communication systems, audio and video communication, and of both PC-based and mobile devices.

The website constructed by the learner as evidence for achievement of learning outcome 3 should be sufficient to permit evidence of a range of content, though the site does not need to be extensive. Around four to six pages is suggested but these could include cut-down duplicate pages for use on a mobile device. The (local or www-hosted) site must be supported by documentation evidencing planning to meet purpose and audience expectation — design briefs (layout sketches) for each page, and a production log recording daily production activities, problems and solutions. The page source should be provided to evidence correct coding, together with a site map or other report showing systematic testing to ensure absence of broken links.

It is not a requirement that learners' sites be uploaded to the worldwide web, though such provision will add realism to the purpose of their work.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will provide basic though correct and substantially complete descriptions, though the evidence of protocols, devices and methods will be discrete and will not be related through examples of communication systems and their use. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and

will make fairly frequent mistakes when they do use it. A learner might note, 'Text and pictures can be sent using email or by messaging services such as MSN from a computer. You can also send them from a mobile using SMS (short messaging service) and MMS (multimedia messaging service.)'

2.1: As a minimum, learners should evidence use of text-based digital communication systems, audio and video communication, and both PC-based and mobile devices; though the use will be cursory and may not reveal an appreciation of purpose other than to complete evidence requirements by tutor observation along with records of use in the form of video or audio recordings, screenshots, personal logs, blogs, wikis or other. Learners will typically have required additional assistance from tutors to prepare their documents.

3.1: learners will have produced a basic though non-trivial site of four to six linked pages; there should be no broken links within the pages presented, though external links may not be fully operational. However, code for such external links must be checked for accuracy. For this unit no consideration is taken of aesthetic quality of page design, but text colour and font sizes must be chosen to permit text to be readable, eg dark blue text should not be presented over a black background. Text must not be obscured by images. Some documentation must be presented — as a minimum the learner must present a design layout for each page. The production log must be present but is likely to be sketchy and presented as brief, discrete statements. At pass a typical page layout may be sketchy and perfunctory, lacking detail and awareness of the purpose of the layout brief. Page content might be restricted to text and image, and metatags might be missing or inappropriate. There may be no evidence of the import of content originating from differing software applications. Individual pages might be treated as discrete entities, with no attempt to apply a consistent style across all pages in the site. Images might not be optimised and aligned against text.

2.1 and 3.1: when engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1 2.1	Assignment 1 – Digital Communications Systems	Contribution to a Virtual Learning Environment explaining and demonstrating uses of digital communication systems.	<ul style="list-style-type: none"> • Blog explaining uses of digital communication systems. • Evidence of individual learner’s use of digital communication systems, eg video, audio recordings, screenshots. • Tutor observation records.
3.1	Assignment 2 – Website Promoting a Film Club	Brief from a local independent cinema to provide a microsite promoting a film club and keeping members informed of upcoming movies, with content accessible by both PC and mobile.	<ul style="list-style-type: none"> • Final product uploaded to web. • Production documentation. • Testing reports. • Reflective development blog.

Essential resources

This unit will require access to a variety of modern digital messaging techniques, and means by which learners can evidence their use. Network permissions may need to be set to permit learner access and contribution to forums, blogs and wikis, though centres may wish to create local in-house variants. VoIP software and permissions are required, also access to videoconferencing software and systems. These need not be highly sophisticated — commonly available webcams and software may suffice.

Learners will need to have personal email accounts, and email archival storage space.

Indicative resource materials

Textbooks

Austin T and Doust R — *New Media Design* (Laurence King Publishing, 2006) 978-1856694315

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Duek G et al — *Wiki: Web Collaboration* (Springer, 2008) 978-3540351504

Krug S — *Don't Make Me Think! A Common Sense Approach to Web Usability* (New Riders, 2005) 978-0321344755

Lloyd I — *Build Your Own Website the Right Way Using HTML & CSS* (SitePoint Pty Ltd, 2006) 978-0975240298

McFedries P and Belicoe M E (editor) — *The Complete Idiot's Guide to Creating a Web Page and Blog* (Alpha Books, 2004) 978-1592572670

McNeil P — *The Web Designer's Idea Book* (How Books, 2008) 978-1600610646

Meloni J — *Bloggng in a Snap* (Sams, 2005) 978-0672328435

Quick R — *Web Design in Easy Steps* (Computer Step, 2006) 978-1840783148

Robbins JN — *Learning Web Design: A Beginner's Guide* (O'Reilly Media, 2007) 978-0596527525

Thurlow C, Tomic A and Lengel L — *Computer Mediated Communication: An Introduction to Social Interaction Online* (Sage Publications Ltd, 2004) 978-0761949541

Websites

ezinearticles.com/?How-Do-I-Make-a-Mobile-Device-Website?&id=686216 — create web pages for mobile devices

web2.ajaxprojects.com/web2/newsdetails.php?itemid=29 — create a Web 2.0 page

webdesign.about.com/od/webdesignbasics/Basics_of_Web_Design.htm — tips on how to design websites

www.about-the-web.com/shtml/creating.shtml — tips on how to design websites

www.go2web20.net/ — lists Web 2.0 tools and applications

www.great-web-design-tips.com/ — tips on how to design websites

www.howtcreate.co.uk/ — tips on how to design websites

www.learnthat.com/internet/all.asp — a directory of web-design tutorials and articles

www.listio.com/ — lists Web 2.0 tools and applications

www.netgear.co.uk/home_newnetwork_broadband.php — simple explanation of different broadband technologies

www.w3.org/QA/Tools — validation tools

www.w3.org/WAI/ — web accessibility standards and guidelines

www.w3schools.com — tutorials

Unit 19: Digital Graphics for Computer Games

Unit code: A/600/6621

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of the unit is to introduce learners to the basic tools and techniques of digital graphics software used to produce images for computer game products. Learners will develop skills in digital imaging software by producing digitally manipulated visual material. They will experiment with graphic styles used to set mood and theme in computer games and reflect critically on their own work.

Unit introduction

Anyone considering a career in the computer games industry needs to be aware of various disciplines and skills relevant to the industry which may be outside their own particular interest or career goals. For example, anyone involved in computer games development must be familiar with the creation of digital images, digital graphics being the basis on which computer games are sold. The creation of digital graphics is relevant to all aspects of design and these skills are highly sought after in the games industry. Those who aspire to work in this industry should therefore gain basic practical experience in the production and development of digital graphics for use in computer games in order to communicate ideas or develop a specialism.

In this unit learners will become familiar with the basic tools and techniques of the digital graphics software used to produce images for computer games. These techniques form the basis of the development of graphics for game poster production, game packaging, in-game graphics such as head up display graphics, sprite graphics, background graphics, image textures and concept art graphics – in short for all print and screen graphics for computer games. This unit is therefore fundamental to the development of digital design skills for the production of computer games.

The digital graphics process includes enhancing or transforming digitally captured images by means of specialist image editing software. Learners will have the opportunity to develop skills in using digital imaging software by producing digitally manipulated visual material.

It is important for learners to develop appropriate skills in using digital graphics software and this unit provides knowledge, understanding and practical experience through a basic awareness and experience of commonly used software tools. Learners will have opportunities to experiment with graphic styles used to set mood and theme in computer game products.

Since this unit encourages learners to express imaginative skills, it is appropriate that some critical self-reflective practice is undertaken. This professional skill will encourage a habit of life-long value in any possible future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand theory and applications of digital graphics used for computer games	1.1 summarise accurately theory and applications of digital graphics used for computer games with some appropriate use of subject terminology
2 Be able to generate concept art ideas for computer game graphics	2.1 generate outline concept art ideas for computer game graphics working within appropriate conventions and with some assistance
3 Be able to create digital graphics for a computer game following industry practice.	3.1 create digital graphics for a computer game following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand theory and applications of digital graphics used for computer games

Artistic styles used in computer games: photorealism; cel-shading; abstraction; exaggeration, eg anime, manga

Computer game graphics: pixel art (2D sprites, 3D isometric sprites); concept art, eg character, weapon, vehicle, environment; texture art; background graphics, eg walls, forests, clouds; in-game interface, eg head up display; print media art, eg game packaging, box cover, manual, label, poster

Pixel: picture element, image resolution, intensity

Types of digital graphics: raster images (bmp, gif, tiff, jpg); vector images (psd, wmf, fla, ai)

File extensions: eg bmp, png, gif, tiff, jpg, psd

Compression: lossy; lossless

Image capture: scanner; digital camera; tablet

Optimising: target image output; image bit depth; image resolution; image dimensions; compression

Storage of image assets: file size, file-naming conventions, asset management

2 Be able to generate concept art ideas for computer game graphics

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; mood boards; thumbnail sketching; concept drawings, eg character, weapon, vehicle, environment

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, representation (race, gender, religion, sexuality), decency, libel

Computer game graphics: print media graphics, eg game poster, game packaging; in-game graphics (head up display graphics, sprite graphics, background graphics, image textures); concept art graphics

Graphics specification: client needs; audience; thumbnail sketching; visual style, eg colour, style, photorealistic, cel-shaded, anime; composition; typography; technical considerations, eg file format, file size, optimisation, file naming conventions, asset management, intended output

3 Be able to create digital graphics for a computer game following industry practice

Plan: asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Software interface: eg work area, tool box, status bar, file information, window control, floating palettes, palette docking and tabs

Asset management: export filepath; file format; compression; file naming conventions; file backup

Workflow: eg reference images, plug-ins, optimising (bit depth, resolution, dimensions)

Menus: open; save; new; import; export; edit; view; help

Image settings: size; resolution, width; height; colour mode; background; transparency; aspect ratio; file name

Drawing tools: tool options; brush; pencil; duplicate; clone; fill; text; line; stroke; shape; zoom; guides and rulers; grid; snap; palettes, eg colour, gradients, layers, object, brushes, history, actions, size, resolution; layers, eg copying, saving, arranging; flattening; colour selection, eg foreground, background, colour swatch, eyedropper

Editing tools: selection, eg marquee, lasso, magic wand, magnetic lasso, deselect; transform, eg scale, rotate, skew, flip; cut; copy; paste; crop; trim; erase; undo; fill

Advanced tools: effects, eg layer effects, filters, channels; image adjustments, eg brightness and contrast, hue and saturation, colour balance, gradients, transparency, invert; masks; paths, eg vector paths, converting text to paths; brushes, brush plug-in

In-game graphics: head up displays; sprite graphics; gif animation; image textures; asset creation from concept art, eg character, weapon, vehicle, environment backgrounds

Print media graphics: eg game packaging, box cover, manual, label, poster, concept artwork

Production stages: original development files; final flattened optimised image

Aesthetic qualities: composition; colour palettes; typography; creation of meaning

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, graphics specification, workflow and time management, technical competence, teamwork)

Delivery

In this unit learners should be encouraged to produce designs for a range of computer game purposes. For example, learners could produce digitally manipulated images for head up displays, sprite graphics, gif animations, image textures, game packaging and asset creation from concept art – the possibilities are extensive.

Directing learners to create graphics for a range of purposes will create a context for their technical investigations. Understanding the difference between bitmap and vector graphics would have much greater meaning if they were comparing the results from a photo editing programme and a vector drawing programme when designing game packaging. Comparing file sizes and quality is much more meaningful when learners are investigating the reasons for optimising graphics for computer game production.

These examples show that an active experimental approach is required to encourage learners to broaden their technical understanding. Equally, they should be encouraged to be experimental creatively. Interesting examples of professional work should be made available for discussion, which can inspire learners in their own work. An important foundation to any digital graphics project is the ideas generation and planning, so time spent on this away from the computer will pay dividends. Learners must be encouraged to think about how ideas are generated and to apply techniques such as brainstorming, mood boards, and concept drawings. Learners should be encouraged to undertake visual research by examining existing professional computer game products related to their client or own brief and by looking at existing artists, game artists, game designers and publishers for inspiration.

Workshops and demonstrations are recommended when teaching software applications. Learners should then be encouraged to apply these software techniques to their own assignment work. It is useful for learners to monitor and review their work during the production, creating a quality control process enabling them to improve technical and creative decisions, thus enabling them to assess their successes in both the production processes and the qualities of their finished products.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to digital graphics techniques. Learners will attend lectures, discussions and demonstrations to: <ul style="list-style-type: none">• examine the applications of digital graphics used for computer games• examine pixels and image resolution and their relationship• explain raster and vector images and their associated file extensions• explain graphic file extensions and their relationship to file compression• explain how to capture an image when using a scanner, digital camera and a tablet• explain how to optimise an image for an indented image output and the storage of image assets.
Assignment 1 – What is Digital Graphics Technology? Learners will write an article for an online computer game art ezine on theory and applications of digital graphics technology used to create digital graphics for computer games. The article will focus on the technology behind digitally generated images and associated compression and optimisation techniques that can be employed for a particular image output. The article must cover: <ul style="list-style-type: none">• styles of graphic art in computer games• the applications of digital graphics used for computer games• picture element and image resolution• types of digital graphics used to create digital images• file extensions used in digital graphics, file compression and optimisation• image capture, image output and storage of image assets.
Introduction to ideas generation. Learners will attend lectures, discussions and demonstrations to: <ul style="list-style-type: none">• examine methods to assist with ideas generation• explain how to develop ideas• explain how to develop a graphics specification.

Topics and suggested assignments and activities

Assignment 2 – Ideas Generation for Digital Computer Game Graphic Assets.

Learners will generate ideas for digital computer game graphic assets for a new computer game in response to a client's brief.

Learners will generate:

- ideas for print media graphics, in-game graphics and concept art graphics for a game
- log or report of the ideas generation process
- concept drawings
- graphics specifications.

Introduction to creating digital graphic images for computer games using digital graphics software and hardware.

Learners will attend lectures and demonstrations, and hold discussions to:

- examine file types and screen image resolution
- examine digital imaging creation tools used for computer game graphics
- examine techniques in the creation of in-game graphics such as head up displays, sprite graphics, gif animations, image textures and asset creation from concept art
- examine techniques in the creation of print media graphics such as game packaging, box cover, manual, label, poster, concept artwork
- examine image output options
- explain the importance of reviewing finished production work.

Assignment 3 – Digital Image Creation for Computer Games.

Learners will create digital graphics as proposed in Assignment 2.

Learners will:

- generate in-game graphics such as head up displays, sprite graphics, gif animations, image textures and asset creation from developed ideas, graphics specifications and concept drawings produced in Assignment 2
- generate print media graphics such as game packaging, box cover, manual, label, poster, concept artwork from developed ideas and graphics specifications produced in Assignment 2
- generate log/report reviewing the finished digital images and their technical and aesthetic qualities and comparing them with original intentions.

Unit learning and assessment review.

Assessment

Evidence for assessment

Achievement of learning outcome 1 can be evidenced through a verbal statement in written or oral form (such as a report, presentation, or a structured audio or audio-visual statement) or through learners' investigations into and experimentation with digital graphics technologies. Notes from lectures, research from the internet, books and periodicals can all contribute to the evidence. Reports based on the learners' experiments will allow them to demonstrate their understanding and to come to their own conclusions on such issues as which resolution to use for which purpose.

Alternatively, understanding can be demonstrated through the application of the relevant concepts or procedures in a practical context. Tutors should note that it is possible to combine verbal description of some elements of the content with practical demonstration of others.

Evidence for the achievement of learning outcome 2 could be evidenced through notes on the creative process, including brainstorming, mood boards and concept drawings.

Evidence for the achievement of learning outcome 3 should be generated in response to a given brief and the planning process, including schedules, asset management and meeting production milestones. Evidence could be made up of notes accompanied by digital documents showing work in progress and finished images, tutor observation of software use and a formally written evaluative review of their finished images.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will be able to describe correctly, and with substantial but not necessarily complete coverage, the key characteristics of digital graphics technology. They will be able to accurately identify technical issues such as image resolution, compression and optimisation using subject terminology

to a limited degree. Alternatively, they will be able to demonstrate the application of these techniques though they will be unable to explain how they have been applied in their own work. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will be able to originate and design a digital graphics project which uses some of the key characteristics of digital graphics in simple and conventional ways, but the conventions applied will be appropriate to the form or genre within which they are working. There will be limited evidence of the development process, such as basic visualisations.

3.1: learners will have achieved some finished images working with basic digital graphics software techniques, but the outcomes will not be particularly successful. The work on the production will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it. Following industry practice, learners will be able to review their finished digital graphics work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. When engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – What is Digital Graphics Technology?	Article on theory and applications of digital graphics technology for an online computer game art ezine.	<ul style="list-style-type: none"> • Collated research data. • Research log. • Ezine – article.

Criteria covered	Assignment title	Scenario	Assessment method
2.1	Assignment 2 – Ideas Generation for Digital Computer Game Graphic Assets	Brief from producer to generate ideas for and create digital graphics for a new computer game.	Development log containing: <ul style="list-style-type: none"> • all ideas notes, brainstorming, mood boards, thumbnail sketching • concept drawings • graphics specifications.
3.1	Assignment 3 – Digital Image Creation for Computer Games	As above.	Project portfolio containing: <ul style="list-style-type: none"> • all stages in the creation of the digital images • finished images • personal review comments on the finished digital images.

Essential resources

For this unit centres should develop their own library of up-to-date resources to include print and digital images (from computer game products, websites, image libraries or professional journals, for example). Because of the practical nature of this subject, learners need to have access to the appropriate hardware and software. At this level hardware and software used should reflect that used in industry.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe Photoshop CS3 Classroom in a Book* (Adobe, 2007)

978-0321492029

Adobe Creative Team — *Adobe Photoshop CS4 Classroom in a Book* (Adobe, 2008)

978-0321573797

Adobe Creative Team — *Adobe Photoshop Elements 7.0 Classroom in a Book* (Adobe, 2008) 978-0321573902

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010)

978-1846907371

Gordon B and Gordon M (editors) — *The Complete Guide to Digital Graphic Design* (Thames & Hudson, 2005) 978-0500285602

Kloskowski M — *Layers: The Complete Guide to Photoshop's Most Powerful Feature* (Peachpit Press, 2008) 978-0321534163

Lea D — *Creative Photoshop: Digital Illustration and Art Techniques* (Focal Press, 2007) 978-0240520469

Williams R — *The Non-Designer's Design Book* (Peachpit Press, 2008) 978-0321534040

Journals

Computer Arts Magazine

Creative Review

Websites

www.adobe.com — the website of this software manufacturer contains useful information and resources, including training materials, forums, downloadable trial software and players, news and so on

www.commarts.com — US-based communication arts magazine featuring articles, profiles, portfolios etc focusing on graphic design

www.computerarts.co.uk — the website for the magazine *Computer Arts* has useful tutorials as well as reviews, competitions, forums and downloads

Unit 20: Graphics for Interactive Media

Unit code: F/600/6622

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of the unit is to introduce learners to the basic tools and techniques of digital graphics software used to produce images for interactive media products. Learners will develop skills in digital imaging software by producing digitally manipulated visual material. They will experiment with graphic styles used to set mood and theme in interactive media products and reflect critically on their own work.

Unit introduction

Anyone considering a career in the interactive media industry needs to be aware of various disciplines and skills relevant to the industry which may be outside their own particular interest or career goals. For example, anyone involved in interactive media production must be familiar with the creation of digital images, digital graphics being the basis on which interactive media are sold. The creation of digital graphics is relevant to all aspects of design and these skills are highly sought after in media industries. Those who aspire to work in this industry should therefore gain basic practical experience in the production and development of digital graphics for use in interactive media in order to communicate ideas or develop a specialism.

In this unit learners will become familiar with the basic tools and techniques of the digital graphics software used to produce images for interactive media. These techniques form the basis of the development of graphics for adverts, magazine pages, websites, DVD interfaces, animations, in short for all print and screen design. This unit is therefore fundamental to the development of digital design skills.

The digital graphics process includes enhancing or transforming digitally captured images by means of specialist image editing software. Learners will have the opportunity to develop skills in using digital imaging software by producing digitally manipulated visual material.

It is important for learners to develop appropriate skills in using digital graphics software and this unit provides knowledge, understanding and practical experience through a basic awareness and experience of commonly used software tools. Learners will have opportunities to experiment with graphic styles used to set mood and theme in interactive media products.

Since this unit encourages learners to express imaginative skills, it is appropriate that some critical self-reflective practice is undertaken. This professional skill will encourage a habit of life-long value in any possible future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand theory and applications of digital graphics technology	1.1 describe theory and applications of digital graphics technology with some appropriate use of subject terminology
2 Be able to generate ideas for digital graphics for an interactive media product	2.1 generate outline ideas for digital graphics for an interactive media product working within appropriate conventions and with some assistance
3 Be able to create digital graphics for an interactive media product following industry practice.	3.1 create digital graphics for an interactive media product following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand theory and applications of digital graphics technology

Applications of Interactive media graphics: navigation eg rollover buttons, navigation bars, navigation menus; animated graphics eg animated gifs; web banners; logo graphics; screen icons; backgrounds; texture graphics

Pixel: picture element, image resolution, intensity

Raster images: compression (lossy, lossless); file extensions eg bmp, png, gif, tiff, jpg psd

Vector images: points; lines; curves; polygons; file extensions eg eps, ai, fla

Bit depth: sampling; bits per pixel (BPP); monochrome; 256; highcolour; truecolour

Colour space: greyscale; RGB (red, green, blue); YUV (luminance and chrominance); HSV (hue, saturation, value)

Image capture: scanners; digital cameras; resolution (pixels per inch); storage (memory, file size, asset management)

Optimising: target destination; bit depth; resolution; dimensions; intended image output eg screen, worldwide web

2 Be able to generate ideas for digital graphics for an interactive media product

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; moodboards; thumbnail sketching

Legal and ethical considerations: copyright; ethical issues eg confidentiality, representation (race, gender, religion, sexuality), decency, libel; Intellectual Property Rights

Interactive media graphics: navigation eg rollover buttons, navigation bars, navigation menus; animated gifs; web banners; logo graphics; screen icons; backgrounds; texture graphics

Graphics specification: client needs; audience; thumbnail sketching; visual style eg colour, style, composition; typography; technical considerations eg file format, file size, optimisation, intended output

3 Be able to create digital graphics for an interactive media product following industry practice

Plan: asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Software interface: eg work area, tool box, status bar, file information, window control, floating palettes, palette docking and tabs

Asset management: export filepath; file format; compression; file naming conventions; file backup

Workflow: eg slicing images, optimising (bit depth, resolution, dimensions)

Menus: open; save; new; import; export; edit; view; help

Image settings: size; resolution, width; height; colour mode; background; transparency; aspect ratio, file name

Drawing tools: tool options; brush; pencil; duplicate; clone; fill; text; line; stroke; shape; zoom; guides and rulers; grid; snap; palettes eg colour, gradients, layers, object, brushes, history, actions, size, resolution; layers eg copying, saving, arranging; flattening; colour selection eg foreground, background, colour swatch, eyedropper

Editing tools: selection eg marquee, lasso, magic wand, magnetic lasso, deselect; transform eg scale, rotate, skew, flip; cut; copy; paste; crop; trim; erase; undo; fill

Advanced tools: effects eg layer effects, filters, channels; image adjustments eg brightness and contrast, hue and saturation, colour balance, gradients, transparency, invert; masks; paths eg vector paths, converting text to paths; image slicing

Image capture: scanner; digital camera

Interactive media graphics: rollover buttons; navigation bars; gif animation; screen icons; logo graphics; backgrounds; menu screens; texture graphics; digital photograph manipulation and editing

Production stages: original development files; final flattened optimised image for client

Aesthetic qualities: composition; colour palettes; typography; creation of meaning

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, graphics specification, workflow and time management, technical competence, teamwork)

Delivery

In this unit learners should be encouraged to produce designs for a range of interactive media purposes. For example, learners could produce digitally manipulated images for web banners, logo graphics, animated gifs or interface elements for web pages and DVD menus — the possibilities are extensive.

Directing learners to create graphics for a range of purposes will create a context for their technical investigations. Understanding the difference between bitmap and vector graphics would have much greater meaning if they were comparing the results from a photo editing programme and a vector drawing programme when designing logos. Comparing file sizes and quality is much more meaningful when learners are investigating the reasons for optimising graphics for interactive media products.

These examples show that an active experimental approach is required to encourage learners to broaden their technical understanding. Equally, they should be encouraged to be experimental creatively. Interesting examples of professional work should be made available for discussion, which can inspire learners in their own work. An important foundation to any digital graphics project is the idea generation and planning, so time spent on this away from the computer will pay dividends. Learners must be encouraged to think about how ideas are generated and to apply techniques such as brainstorming and mood boards. Learners should be encouraged to undertake visual research by examining existing professional products related to their client or own brief and by looking at existing artists and designers for inspiration.

Workshops and demonstrations are recommended when teaching software applications. Learners should then be encouraged to apply these software techniques to their own assignment work. It is useful for learners to monitor and review their work during the production, creating a quality control process enabling them to improve technical and creative decisions thus enabling them to assess their successes in both the production processes and the qualities of their finished products.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to digital graphics techniques. Learners will receive lectures, hold discussions and demonstrations to: <ul style="list-style-type: none">• examine the applications of interactive media graphics• examine pixels and image resolution and their relationship• explain Raster and Vector images and their associated file extensions• explain graphic file extensions and their relationship to file compression• explain bit depth and colour space• explain how to capture an image when using a scanner and a digital camera• explain how to optimise an image for an indented image output.
Assignment 1 – What is Digital Graphics Technology? Learners have been commissioned to write an article on digital graphics technology for an online digital graphics art ezine. They must cover the technology behind digitally generated images and associated compression and optimisation techniques that can be employed for a particular image output. Learners will: <ul style="list-style-type: none">• investigate the applications of Interactive media graphics• investigate picture element and image resolution• investigate types of digital graphics used to create digital images• investigate file extensions used in digital graphics, file compression and optimisation• investigate image capture, image output and storage of image assets• generate log/report during investigations of relevant digital graphics technologies used to create digital graphics for interactive and print media products.
Introduction to ideas generation. Learners will receive lectures, hold discussions and demonstrations to: <ul style="list-style-type: none">• examine methods to assist with ideas generation• explain how to develop ideas• explain how to develop a graphics specification.

Topics and suggested assignments and activities

Assignment 2 – Ideas Generation for Interactive Media Graphics.

Learners receive a brief from college management to create digital graphics for the DVD interactive navigation menu for a new media course.

Learners will:

- generate ideas for rollover buttons, navigation bars, animated gifs, banners, logos and icons for an interactive media product
- generate log/report of the ideas generation process
- generate graphics specifications.

Introduction to creating digital graphic images for interactive media products using digital graphics software and hardware.

Learners will receive lectures and demonstrations, and hold discussions to:

- examine file types and screen image resolution
- examine digital imaging creation tools used for interactive media products
- examine techniques in the creation of rollover buttons, navigation bars, animated gifs, banners, logos and icons for an interactive media product
- examine image output options
- explain the importance of reviewing finished production work.

Assignment 3 – Digital Image Creation for Interactive Media.

Learners create graphics based on ideas developed in Assignment 2.

Learners will:

- generate rollover buttons, navigation bars, animated gifs, banners, logos and icons for an interactive media product digital graphics from developed ideas and graphics specifications produced in assignment 2
- generate log/report reviewing the finished digital images comparing them with original intentions and their technical and aesthetic qualities.

Assessment

Evidence for assessment

The grading criteria for learning outcome 1 require that learners 'demonstrate understanding.' This can be done through a verbal statement in written or oral form (such as a report, presentation, or a structured audio or audio-visual statement) or through learners' investigations into and experimentation with digital graphics technologies. Notes from lectures, research from the internet, books and periodicals can all contribute to the evidence. Reports based on the learners' experiments will allow them to demonstrate their understanding and to come to their own conclusions on such issues as which resolution to use for which purpose.

Alternatively, understanding can be demonstrated through the application of the relevant concepts or procedures in a practical context.

Tutors should note that it is possible, of course, to combine verbal description of some elements of the content with practical demonstration of others.

Evidence for the achievement of learning outcome 2 could be evidenced through notes on the creative process, including storyboards and sketches, and the planning process, including schedules and minutes of meetings.

Evidence for the achievement of learning outcome 3 should be generated in response to a given brief. Evidence could be made up of notes accompanied by digital documents showing work in progress and finished images, tutor observation of software use and a formally written evaluative review of their finished images.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will be able to describe correctly, and with substantial but not necessarily complete coverage, the key characteristics of digital graphics technology. They will be able to accurately identify technical issues such as resolution, colour space and optimisation. Alternatively, they will be able to

demonstrate the application of these techniques though they will be unable to explain how they have been applied in their own work. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will be able to originate and design a digital graphics project which uses some of the key characteristics of digital graphics in simple and conventional ways, but the conventions applied will be appropriate to the form or genre within which they are working. There will be limited evidence of the development process, such as basic visualisations.

3.1: learners will have achieved some finished images working with basic digital graphics software techniques, but the outcomes will not be particularly successful. The work on the production will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it. Following industry practice, learners will be able to review their finished digital graphics work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification.

2.1 and 3.1: when engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – What is Digital Graphics Technology?	Article on digital graphics technology for an online digital graphics art ezine.	Report document as word-processed or electronic document presenting: <ul style="list-style-type: none"> • collated research data • research log • ezine article.

Criteria covered	Assignment title	Scenario	Assessment method
2.1	Assignment 2 — Ideas Generation for Interactive Media Graphics	Brief from college management to create digital graphics for the DVD interactive navigation menu for a new media course.	Development log containing: <ul style="list-style-type: none"> • all ideas notes, brainstorming, moodboards, thumbnail sketching • graphics specifications.
3.1	Assignment 3 – Digital Image Creation for Interactive Media	As above.	Project portfolio containing: <ul style="list-style-type: none"> • all stages in the creation of the digital images • finished images • personal review comments on the finished digital images.

Essential resources

Centres should develop their own library of up-to-date resources to include print and digital images (from interactive media products, websites, image libraries or professional journals, for example). Because of the practical nature of this subject learners need to have access to the appropriate hardware and software. At this level hardware and software used should reflect that used in industry.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe Photoshop CS3 Classroom in a Book* (Adobe, 2007) 978-0321492029

Adobe Creative Team — *Adobe Photoshop CS4 Classroom in a Book* (Adobe, 2008) 978-0321573797

Adobe Creative Team — *Adobe Photoshop Elements 7.0 Classroom in a Book* (Adobe, 2008) 978-0321573902

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Gordon B and Gordon M (editors) — *The Complete Guide to Digital Graphic Design* (Thames & Hudson, 2005) 978-0500285602

Kloskowski M — *Layers: The Complete Guide to Photoshop's Most Powerful Feature* (Peachpit Press, 2008) 978-0321534163

Lea D — *Creative Photoshop: Digital Illustration and Art Techniques* (Focal Press, 2007) 978-0240520469

Williams R — *The Non-Designer's Design Book* (Peachpit Press, 2008) 978-0321534040

Journals

Computer Arts Magazine

Creative Review

Websites

www.adobe.com — the website of this software manufacturer contains useful information and resources, including training materials, forums, downloadable trial software and players, news and so on

www.commarts.com — US based communication arts magazine featuring articles, profiles, portfolios etc focusing on graphic design

www.computerarts.co.uk — the website for the magazine Computer Arts has useful tutorials as well as reviews, competitions, forums and downloads

Unit 21: Digital Graphics for Print

Unit code: L/600/6624

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to give learners the knowledge and skills needed to produce, process, control and manipulate digital graphics used for a range of print, interactive and moving image media.

Unit introduction

The inclusion of appropriate graphics in a print, moving image or interactive media product is often crucial to its ability to attract the right audience and to communicate effectively the desired message. Print-based products such as newspapers, magazines, posters, flyers, DVD and CD covers all include graphics and illustrations that are there to grab the reader's attention and communicate a specific message. Interactive products such as websites, computer games and CD ROMs will all incorporate some form of digital graphics, and many films, videos and television programmes will include sequences that include some form of digital graphics, particularly in the opening titles and closing credits.

Producing and manipulating effective graphics for print and digital media products is a skilled job that requires not only creative graphic design skills but also practical skills and experience of using a range of image design and manipulation software that is at the heart of most media production processes today.

The increased use of computer hardware and image design software means that a graphic designer working in the industry today needs to be familiar with a number of different graphic files and formats, and have the necessary skills and knowledge to be able to process, control and combine these files into effective and aesthetically pleasing media texts.

Through completing this unit learners will gain a practical understanding of the principles and conventions underlying effective digital graphic design, and will be able to apply the skills and techniques learnt to a range of different contexts.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand graphic file formats and applications	1.1 describe graphic file formats and their applications with some appropriate use of subject terminology
2 Be able to use appropriate image design and manipulation software	2.1 use appropriate image design and manipulation software working within appropriate conventions and with some assistance
3 Be able to produce digital graphics in response to a brief	3.1 design and produce digital graphics in response to a brief working within appropriate conventions and with some assistance
4 Be able to reflect on own digital graphics work.	4.1 comment on own work with some appropriate use of subject terminology.

Unit content

1 Understand graphic file formats and applications

File formats: range of common formats, eg raster, vector, metafiles; file extensions

Applications: vector-based applications; raster-based applications; use in different media forms (print, moving image, interactive)

2 Be able to use appropriate image design and manipulation software

Workspace: work area; toolbox; status bar; file information; tool option bar; palette well; window control; floating palettes

Tools and features: palettes (colour, layers, objects, brushes, history, actions, size, resolution); tools (marquee, lasso, magic wand, magnetic lasso, selecting, cropping, clone tool); layers (transforming layers, copying and saving layers, arranging layers, opacity and blending modes, layer effects); manipulation (feathering edges, filters, brightness and contrast, hue and saturation, masks, paths, textures, effects); save; undo

3 Be able to produce digital graphics in response to a brief

Develop ideas: establish concept; select format; length and nature of content; consideration of audience usage; layout design; input and manipulation of images; selection of style and tone; consideration of limitations and advantages of format; deadlines; schedule

Production of graphics: selection of file formats; conversion to appropriate formats; embedding and encoding of required elements; testing and troubleshooting; uploading; exporting and outputting to file formats

4 Be able to reflect on own digital graphics work

Effectiveness: extent to which brief has been realised; use of appropriate methods and techniques; skill level evidenced; level of professionalism achieved; what final version communicates; processes undertaken; problem solving; skill development; areas for improvement

Sources of information: self-evaluation; documentation, eg notes, sketches, production logs; comments from others, eg audience, peers, tutors, client

Production process: pre-production, eg planning, preparation; production, eg time management, project management, monitoring work in progress, technical competencies, creative ability, own work, teamwork

Finished product: compared with original intentions; appropriateness to audience; technical qualities; aesthetic qualities; content; style

Delivery

The unit is intended to develop an understanding of the range of practical applications for producing, editing and manipulating digital graphics. Learners should be given the opportunity to develop knowledge, skills and techniques associated with the relevant software programmes that reflect current industrial practice. Lectures, demonstrations, workshops and discussions should be incorporated into the teaching programme as should opportunities for learners to practise and experiment with the relevant hardware and software applications. This is primarily a software skills development unit and is best taught through demonstration, discussion and practical activities, with learners having time to further practise and develop their skills through open-access sessions and workshops.

Developing an understanding of the use of software should be undertaken in short, carefully structured stages, each stage being reinforced with small practical projects which, when completed, allow progress to other stages. Learners should clearly identify the strengths and weaknesses of their work in order for them to move on in their development. They should also demonstrate their developing use of appropriate terminology. They will then have the opportunity to reflect and comment on the effectiveness of their work to be in a better position to further their skill development.

If learners undertake practical work as part of a group, it is important that individual learners clearly record and document their own contributions to the group project, and identify the different roles that they undertook at each of the production stages.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Group exercise – investigation and analysis of examples of digital graphics in media products.
Assignment 1 – Investigating Graphic File Formats and Applications. Learners are given a brief from a design magazine to write an article on the main graphic file formats and applications that are used in the production of media products. Learners will: <ul style="list-style-type: none">• receive assignment overview• research and investigate the main graphic file formats and applications used in the production of media products• write the article• receive assessment feedback and have further opportunities to address grading criteria.
Whole class induction to image design and manipulation software.
Assignment 2 – Skill Development. Learners are given a brief from a prospective employer to produce a portfolio of work that showcases the development of skills in using image design and manipulation software. Learners will: <ul style="list-style-type: none">• receive assignment overview• develop software skills through the design and production of a range of digital graphics, experimenting with a range of different tools and features• collate final portfolio• receive assessment feedback and have further opportunities to address grading criteria.
Individual review of own work and assessment of skill development.

Topics and suggested assignments and activities

Assignment 3 – Design and Produce Digital Graphics.

Learners are given a series of briefs from a media production company to design and produce digital graphics for inclusion in a range of their products.

Learners will:

- receive assignment overview
- design and produce a series of digital graphics in a range of file formats
- collate final portfolio
- receive assessment feedback and have further opportunities to address grading criteria.

Whole class session looking at a selection of the work produced.

Whole class session looking at techniques and methods for evaluating work undertaken and presenting final report.

Assignment 4 – Review of Own Work.

Learners are given a brief from the media production company to write a report that reviews and evaluates the work undertaken for them, with consideration of the production processes undertaken, the finished products and their effectiveness.

Learners will:

- receive assignment overview
- gather relevant material and feedback and evaluate the work undertaken
- write the report
- receive assessment feedback and have further opportunities to address grading criteria.

Assessment

Evidence for assessment

As is the case for many of the other practical-based units, learners should be developing and building a portfolio of their work throughout the duration of the unit. This portfolio should contain evidence of all the required understanding and skills detailed in the grading criteria.

Evidence for the achievement of learning outcomes 2 and 3 might include examples of the learner's completed work together with examples of 'work in progress' and the various planning, preparation and developmental stages undertaken. Screenshots and printouts can provide explicit evidence of learner achievement and can be supported by tutor observation and assessment records. If assessments are based on conversations recorded in writing (as witness or observation reports) care must be taken to ensure that at least 50 per cent of such assessments are subject to internal verification.

Evidence for the achievement of learning outcomes 1 and 4 might be submitted as a report, essay or presentation, or in some other appropriate form such as a suitable audio, moving image or interactive medium. Presentations must be recorded for the purposes of internal and external verification.

If learners have worked in groups on a particular brief or project, then individual learners must clearly document their own contribution to the group project and identify the different roles they undertook at each of the production stages.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe accurately the main file formats and applications used in digital graphics work. All aspects of the descriptions will be accurate and relevant and will be substantially — though not necessarily absolutely — complete. For example, the description should include both vector and raster file formats and applications. However, these descriptions will lack detail and relation to illustrative examples.

2.1 and 3.1: learners will have used appropriate image design and manipulation software, employing relevant tools and features to produce and refine their designs. The digital graphics presented will not fully realise what was intended, but will show that they have been produced with some sense of purpose and the deliberate application of some relevant techniques and conventions. Learners will need to keep all associated supporting work, which should show the different stages of progress and development. In terms of the imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners may require frequent assistance and support throughout the production process, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

4.1: learners will consider their own work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification.

1.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Investigating Graphic File Formats and Applications	A brief from a design magazine to write an article on the main graphic file formats and applications that are used in the production of media products.	<ul style="list-style-type: none"> • Research notes. • Summary of research. • Written article.
2.1	Assignment 2 – Skill Development	A brief from a prospective employer to produce a portfolio of work that showcases the development of skills in using image design and manipulation software.	<ul style="list-style-type: none"> • Log of developmental stages undertaken. • Portfolio of experimental work undertaken. • Report on skills developed.
3.1	Assignment 3 – Design and Produce Digital Graphics	A series of briefs from a media production company to design and produce digital graphics for inclusion in a range of their products.	<ul style="list-style-type: none"> • Log of production process. • Completed designs and digital graphics. • Feedback from client.

Criteria covered	Assignment title	Scenario	Assessment method
4.1	Assignment 4 – Review of Own Work	A brief from the media production company to review and evaluate the work undertaken for them.	<ul style="list-style-type: none"> • Review of own work. • Tutor observation and notes.

Essential resources

Centres will need appropriate hardware and software of industrial standard. Learners should also have access to relevant software manufacturers' manuals and other textbooks, the internet, and a range of examples that illustrate current digital graphics practice.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Berger J — *Ways of Seeing* (Penguin, 2008) 978-0141035796

Collier D and Cotton B — *Design for Desktop Publishing* (Headline, 1989) 978-0891342854

Crowley D — *Magazine Covers* (Mitchell Beazley, 2003) 978-1840006988

Dalley T — *Complete Guide to Illustration and Design* (Quantum Books, 2003) 978-1861607249

Fiell C — *Graphic Design for the 21st Century* (Taschen, 2003) 978-3822816059

Gatter M — *Getting it Right in Print: Digital Prepress for Graphic Designers* (Laurence King, 2005) 978-1856694216

Gordon B and Gordon M (editors) — *The Complete Guide to Digital Graphic Design* (Thames & Hudson, 2005) 978-0500285602

Pipes A — *Production for Graphic Designers*, 5th Edition (Laurence King, 2009) 978-1856696012

Williams R — *The Non-Designer's Design Book* (Peachpit Press, 2008) 978-03215340401

Unit 22: Digital Video Production for Interactive Media

Unit code: T/502/5674

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to the production and use of digital video material for an interactive media product. Learners will investigate how video is used in interactive media products and will examine the technology used to produce and manipulate digital video sequences. Learners will plan and create a video sequence and prepare it for use within an interactive media product.

Unit introduction

Moving images are no longer restricted to the cinema and TV. Changes in technology mean that people expect to be able to watch and share movies online and on the move. As the proportion of internet users on broadband continues to grow, it becomes increasingly possible to view, upload and download films quickly. Mobile phones carry increasingly sophisticated technology for shooting, sharing and playing moving images. Portable music players show television content and people can watch movies on their portable games consoles. DVD has replaced VHS video as the ubiquitous format for watching movies at home so every popular format is now digital. In short, video in interactive media is everywhere. The implication for interactive media producers is that their work is converging with that of traditional film and video producers, but with an added requirement to implement this through current digital media technologies. This presents some new challenges for learners, including the technological requirements of this proliferation of platforms.

This unit begins with investigations into video in interactive media, enabling learners to understand both the uses and the technologies. Learners will then plan a digital video project, generating ideas, making decisions about content, storyboarding, editing, and producing digital video material for use in an interactive media context.

Learners can use this unit to gain experience of producing digital video material and preparing it for incorporation in an interactive media product such as DVD, worldwide web or mobile device delivery. Exporting the edited video using the appropriate compression and file format is crucial to its functionality on particular platforms.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand principles of digital video technology in interactive media	1.1	summarise accurately the principles of digital video technology in interactive media using some subject terminology appropriately
2	Be able to devise a digital video sequence for use in an interactive media product	2.1	generate outline ideas for a digital video sequence working within appropriate conventions and with some assistance
3	Be able to shoot and source digital video assets for use in an interactive media product	3.1	generate digital video assets with some assistance
4	Be able to create a digital video sequence for use in an interactive media product following industry practice.	4.1	create a digital video sequence for use in an interactive media product following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand principles of digital video technology in interactive media

Applications: uses, eg short films, promotional material, film trailers, user-generated content, viral marketing, advertising, virtual reality tours, games, e-learning; platforms, eg worldwide web, email attachments, DVD, CD, kiosks, presentations, mobile devices

Technology: digital video capture; compression (lossy, lossless); digital video file formats (.mpg, .mp4, .mov, .avi, .wmv, .flv, .swf, .3GP, .ASF); streaming methods (downloading, progressive downloading, streaming); data transfer rate; file size (resolution, data rate, frame rate, key frame rate, compressor, audio settings); aspect ratio, (4:3, 16:9); media players (Flash Player, QuickTime, Windows Media Player, RealMedia Player, DivX); digital rights management systems

2 Be able to devise a digital video sequence for an interactive media product

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; pre-visualisation (sketches, storyboard, script)

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, representation (race, gender, religion, sexuality), decency, libel

Video sequence specification: client needs; audience; script; storyboard; technical considerations, eg platform, file format, file size, compression, streaming method, media player

3 Be able to shoot and source digital video assets for use in an interactive media product

Plan: workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Shoot video assets: shot quality (lighting, focus, depth of field, colour balance, exposure); shot composition (camera angle, framing)

Source video assets: eg video library, online, broadcast, client, peers, tutor

4 Be able to create a digital video sequence for use in an interactive media product following industry practice

Asset management: importing (shot video, sourced video); organising (file storage and retrieval, naming conventions)

Post-production software techniques: workspace, eg browser/project window, timeline window, toolbox window, effects tab, audio mixer tab; creating a new project; importing; editing decisions (logging, edit decision lists, editing to sound, editing for continuity, creating narrative flow), editing clips (trimming clips, three point editing, rolling and ripple edits); transitions (transition setting, adding, editing); creating a still image sequence; colour correction; video effects; audio (editing, gain, fade); titles (static, rolling); colour-separation overlay; compositing

Exporting digital video for interactive media products: platforms, eg worldwide web, CD, DVD, kiosks, presentations, mobile devices; compression; digital video file formats, eg .mpg, .mp4, .mov, .avi, .wmv, .flv, .swf, .3GP, .ASF; streaming method, eg downloading, progressive downloading, streaming; data transfer rate; file size, eg resolution, data rate, frame rate, key frame rate, compressor, audio settings; aspect ratio, eg 4:3, 16:9; media players, eg Flash Player, QuickTime, Windows Media Player, RealMedia Player, DivX

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities); production skills (ideas generation, video sequence specification, workflow and time management, technical competence, teamwork)

Delivery

This unit is intended to develop learners' understanding of practical applications of digital video in interactive media. This is a software skills and knowledge unit and it is best taught through demonstration, discussion, practical projects and visits from practitioners. Learners should be encouraged to experiment with a range of digital video editing software techniques.

Learners should understand how video material can be incorporated into interactive media applications. Existing products should be examined to consider technical issues related to the chosen platform. Learners should consider how and why they would use video in interactive media and the implications of video compression on the quality of picture and sound. They should consider the purpose of the video and the needs of the target audience.

Learners need to understand that much of the hard work developing an effective video clip happens long before they begin filming. They should rough out their ideas for the subject matter of the clip. This can be done effectively through developing their ideas using storyboards describing the most important steps in the process. Through the production of a script learners should expand detail about the video action and subject matter for any narration (voiceover) that is required or dialogue between characters identified in the storyboarding activity.

They should make note of information relating to the filming, such as camera angles and effects (pan, zoom etc). Specifically, they should identify any event that might require a change in camera angle or setup.

Learners will shoot digital video material in this unit as the raw material for editing. They will also use found footage from broadcast or other sources (subject to relevant copyright clearance or permission). Learners must use industry-standard video editing software to edit and produce digital video for an interactive media product. They should understand how edited material can be exported for interactive media applications.

Critical self-reflective practice is important to all creatives, and is an important personal professional tool. Learners should be encouraged at every opportunity to record their evaluative comments for future reflection and for personal development. Reflections could be noted in personal logs, blogs or wikis.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to digital video technology in interactive media products. Learners: <ul style="list-style-type: none">• attend lectures, discussions and demonstrations to examine how video is used in an interactive media product• attend lectures, discussions and demonstrations to examine the types of platforms used by interactive media products• attend lectures and hold discussions to explain digital video technology• analyse the technology used to create and deliver digital video via interactive media platforms, making notes and discussing observations.
Assignment 1 – Video for Interactive Media: What You Need to Know. Learners will write an article on how designers use digital video technology to enhance a user’s interactive experience on different delivery platforms for an online media ezine. The article must cover: <ul style="list-style-type: none">• applications• technology as relevant to each application.
Introduction to and review of ideas generation and recording.
Assignment 2 – Video for College Promotional Interactive CD. Part 1 Working individually to a brief from the college management learners will generate ideas for a video sequence for a college promotional interactive CD. Learners will: <ul style="list-style-type: none">• consider and interpret a creative brief• generate and record ideas• carry out pre-production planning• compile a comprehensive development log evidencing their creative work.

Topics and suggested assignments and activities

Workshop sessions on development of practical skills to create video assets by:

- formal brief introductory lecture at commencement of sessions covering skills to be developed in session and covering:
 - production processes
 - digital video recording equipment
 - production workflow and management processes.

Assignment 2

Part 2

Learners will create and source digital video assets for the college CD.

Learners will:

- undertake production workshop sessions following their planned ideas and specification
- present work including management of own interactive media production work.

Introduction to digital post-production techniques applied to digital video for an interactive product by:

- using digital video editing software tools
- production process and technical considerations
- presentation of work including own digital video work
- considering technical qualities and fitness for purpose of own digital video work.

Assignment 2

Part 3

Learners will create a digital video sequence using generated and sourced assets from Part 2 of this assignment.

Learners will:

- complete digital video sequence production work
- review their own digital video sequence production work.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcome 1 could be in the form of an electronic presentation or written report. Presentations must be recorded for the purposes of internal and external verification.

Achievement of learning outcomes 2 and 3 will most likely be evidenced by the learner's planning for, and management of, the creation of digital video material for an interactive media product. This could be shown through notes on the creative process, including storyboards and sketches, and the planning process, including schedules and minutes.

For learning outcome 4, learners must be provided with an interactive media product containing placeholders for the insertion of their edited and sourced digital video sequences; this can be either a product they have created in another unit or one provided by the tutor. Evidence for the achievement of learning outcome 4 will be the final digital video material integrated into the interactive media product, with any associated post-production documentation. This could be supplemented through notes and observation of software use.

Learners should test the fitness for purpose of their digital video production through reflective practice, comparing the finished edited and integrated digital video sequence with their original intentions. Reflection by client, peers and target audience, and notes from tests for technical functionality on the relevant platforms may also be used as evidence for learning outcome 4.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will accurately review the uses of video in interactive media. They will accurately identify the possible technical issues when using a digital video sequence on different delivery platforms and the different technical issues related to file formats and file size. Evidence will show a

basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it. Learners will also recognise reasons for the use of video sequences in interactive media products. Learners will demonstrate their understanding by distinguishing correctly between, for example, film trailers, advertising and user-generated content online. However, they may not, for example, be able to explain why a particular delivery platform might be used as opposed to another. They will not refer to examples from their work to illustrate points made.

2.1 and 3.1: learners will plan and shoot a video sequence in simple and conventional ways. There will be limited evidence of the development process, project management, monitoring and review of shot quality and shot composition, such as basic storyboards, scripts, and edit decision lists. The proposal will be basic but sufficient to indicate intended purpose and medium of delivery of the digital video sequence including a basic outline indicating the target audience; however, the learners' intentions and decisions will not be justified. Evidence of their production process will briefly outline some of their production management processes. They will have provided the sourced digital video material and shot digital video material with a simple outline indicating shot quality and composition.

4.1: learners will use video post-production software techniques at a basic level to produce a digital video sequence for integration into an interactive media product. Production values will be low, which means that there may be technical faults, and edit decisions may reflect inappropriate selection and unsophisticated sequencing of shots. The finished digital video sequence will be basic though appropriate to its purpose and target audience. The exported video will reflect a limited understanding of compression and choice of file types for the medium of delivery. Learners will make comments evaluating their own work, comparing the finished edited and integrated digital video sequences with their original intentions and making reference to fitness for purpose. They will make brief, superficial comments that do not address opportunities for future improvement or explain why decisions were taken. They will not refer to examples from their work to illustrate points made. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1, 3.1 and 4.1: in all practical activities learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Video for Interactive Media: What You Need to Know	Contribution to online media ezine article on use of video in interactive media.	<ul style="list-style-type: none"> All preparatory notes. Report document as word-processed or electronic presentation.
2.1	Assignment 2 – Video for College Promotional Interactive CD, Part 1	Brief from college management to create video sequence for interactive CD to promote the college.	Development log containing: <ul style="list-style-type: none"> all ideas notes, storyboards, scripts video specifications proposal outline planning notes.
3.1	Assignment 2, Part 2	As above.	Project portfolio containing: <ul style="list-style-type: none"> unedited digital video existing digital video development log all production documentation.
4.1	Assignment 2, Part 3	As above.	Project portfolio containing: <ul style="list-style-type: none"> edited digital video integrated into interactive CD development log personal reflective comment.

Essential resources

For this unit centres will need appropriate hardware and software of industry standard. Learners should also have access to relevant software manufacturers' manuals, textbooks, the internet and a range of examples of current interactive media video practice.

Learners must be provided with an interactive media product containing placeholders for the insertion of their edited and sourced digital video sequences: either one they have created in another unit or one provided by the tutor.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe Premiere Pro CS3 Classroom in a Book* (Adobe, 2007) 978-0321499806

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Jack K — *Video Demystified* (Newnes, 2007) 978-0750683951

Kindem G and Musburger R — *Introduction to Media Production: The Path to Digital Media Production* (Focal Press, 2009) 978-0240810829

Underdahl K — *Digital Video for Dummies* (John Wiley & Sons Ltd, 2006) 978-0471782780

Watkinson J — *The MPEG Handbook* (Focal Press, 2004)

Wells P — *Digital Video Editing: A User's Guide* (The Crowood Press Ltd, 2007) 978-1861269522

Wohl M — *Advanced Editing Techniques in Final Cut Pro 5* (Peachpit Press, 2006) 978-0321335494

Journals

DV

Websites

www.adobe.com — the website of this software manufacturer contains useful information and resources, including training materials, forums, downloadable trial software and players, news etc

www.apple.com — the 'developer' section of the Apple website offers training, news, reference and resources

www.dv.com — *DV* magazine website specialises in digital video production news and information

www.lynda.com — specialises in instructional books, CD ROMs and DVDs in creative computing

Unit 23: Drawing Concept Art for Computer Games

Unit code: A/502/5675

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop learners' practical skills in drawing game concept art. Learners will examine how concept art is used within computer games and will use a variety of drawing media to develop skills in observational drawing. Learners will use these skills to visualise imagined characters, objects and locations for a game concept and will reflect on the quality of their work.

Unit introduction

Game design is about daydreams. But such dreams must be visualised and these images must be communicated to team members and managers for further development. We live in a world where images are everywhere. The games industry uses images for many reasons, from convincing us to purchase the game with attention-grabbing posters and eye-catching packaging, to contributing to our suspension of disbelief during gameplay through realistic graphics. The most effective images contain multiple messages which can enhance the meaning of the imagery.

Designers must be able to communicate their vision to artists, programmers, producers, marketing staff and others involved in the development process, and accept feedback on their work. To enable this communication, each person entering this industry needs to have a basic ability to communicate through drawing. The essence of this unit is to develop drawing skills to permit effective communication of a game developer's dreams — the visualisation of imagined characters, objects and locations within the game concept.

This unit will provide learners with opportunities to explore visual responses to ideas and environments. Learners will have opportunities to develop practical skills and an understanding of the relationship between their work and that of artists and designers in the games industry. Learners will develop awareness of historical, cultural and social contexts and their relevance to the development of ideas and research.

In this unit learners will use a variety of media to develop their skills and ability in observational drawing. The process of observational work includes the ability to analyse, measure, dissect and accurately describe. To achieve this, the learner will have opportunities to explore, understand and communicate what they are observing, while incorporating formal elements into their drawings to show the use of line, shape, form, colour, pattern and texture.

The unit provides an opportunity to develop skills in visual communication through drawing of game concept art to match an intended brief. It will also develop the learner's ability to reflect critically on their own work, as they will need this professional skill in any future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand the purpose of concept art for computer games	1.1	describe the purpose of concept art for games with some appropriate use of subject terminology
2	Be able to explore the potential of drawing media	2.1	apply different drawing media and techniques to produce alternative representations, working within appropriate conventions and with some assistance
3	Be able to draw anatomy, environment and object concept art for computer games	3.1	draw anatomy, environment and object concept artwork for computer games showing a basic standard of drawing skill, working within appropriate conventions and with some assistance
4	Be able to present concept artwork for computer games.	4.1	lay out concept artwork for computer games to a basic standard with some assistance.

Unit content

1 Understand the purpose of concept art for games

Examples: game publishers' websites; textbooks; journals and magazines

Purpose: visualisation of concepts; visual communication of ideas, eg visual elements, style, mood, look, feel, colour schemes; storyboards

2 Be able to explore the potential of drawing media

Explore: experimental drawings; annotation (characteristics, effects, limitations, creative potential)

Drawing media: pencils; charcoal; pastel; wax crayon; pen and ink; marker pens; other mark-making implements

Drawings: life drawing (physical characteristics); natural form (pattern, texture, form); architectural drawing (exterior and interior perspectives, plans and elevations)

3 Be able to draw anatomy, environment and object concept art for games

Intended purpose: for reference visualisation; for visual communication of ideas

Constraints: original intellectual property (IP), franchised IP, client brief, target audience; ethical issues, eg representation (race, gender, religion, sexuality), decency

Sources of ideas: eg direct observation, narrative, photographic, cinematic, explorative research

Drawing styles: direct observation; stylised form, eg cartoon, manga

Anatomy concept art: anatomy, eg characters, creatures; development study drawings; final piece

Environment concept art: environment, eg plants, buildings, terrain; development study drawings; final piece

Object concept art: objects, eg machines, vehicles, weapons; development study drawings; final piece

4 Be able to present concept art for games

Layout: poster size, eg to suit purpose; layout, eg symmetry, format

Annotation to drawings: purpose; idea sources; reflective comment (compared with original intentions, fitness for purpose, aesthetic qualities)

Poster montage: development studies; final piece; annotations

Delivery

This unit provides opportunities to experiment with a range of drawing techniques using a variety of equipment, materials, technologies and methods. Although the majority of learners' work will be carried out in a studio or workshop environment, it would be very helpful to include discussions, study of graphic novels and visits to game development studios. The unit presents opportunities for practical drawing activity both in the studio and out-of-doors. Research using the internet and library resources will form an essential part of the learning programme. Teaching should stimulate, motivate, educate and inspire the learner. It should be planned to help learners develop knowledge and understanding of working with a variety of mark-making media and materials and their associated techniques and processes.

It is suggested that teaching follows the order of the learning outcomes, starting with study of purpose and following that with development of the learners' skills in using drawing media, which can be demonstrated in the production of concept art.

Study of the purpose of game concept art is likely to be taught through demonstration and studio discussion. Centres are strongly encouraged to seek a close relationship with at least one organisation in the game industry (publisher, design studio, distributor etc) which could be approached to provide exemplar concept art from past game titles.

Learners should undertake observational studies and work directly from primary sources in order to develop their drawing skills. Primary sources should include the natural world and the constructed world, both of which offer a huge range of subjects. These might include, from the natural world, the human form, animals, insects, plant forms and structures, landscapes and seascapes, and from the constructed world, built environments, architecture, townscapes, machinery, engineering, products, artefacts or objects. In developing drawing skills through observational work, learners will need to develop their use of visual language including line, tone, colour, texture, shape, form, scale, proportion, structure and perspective. Direct observational work may be undertaken in 2D, 3D or 4D formats.

Mark-making and drawing development should not be restricted to pencil and paper work. Learners should experience a variety of different approaches to explore ways in which mark-making skills can be used to express ideas and feelings, especially for character concept art. Learners should be challenged to take risks, push ideas beyond preconceived notions and develop their understanding of drawing beyond a narrow and superficial definition. Learners must be encouraged to break away from orthodox thinking to produce original concept images which match client brief or IP and are commercially viable. Learners will need to practise how to evaluate, refine, adapt and modify their results to meet their creative intentions. They will also need to plan and produce preliminary results for evaluation and keep records of their thinking and conclusions.

Learners will also need to develop the ability to critically analyse the examples using appropriate technical language in terms of aesthetic qualities and fitness for purpose.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to purpose of concept art in games: learners receive lectures and demonstrations on purposes and drawing styles.
<p>Assignment 1 – Concept Art for Games: What You Need to Know.</p> <p>Learners write an illustrated article on purposes of concept art in computer games for an online computer games ezine.</p> <p>Learners will:</p> <ul style="list-style-type: none"> • research use of concept art in games • research illustrations for article • write article, commenting on styles and purpose of illustrations • lay out article with illustrations.

Topics and suggested assignments and activities

Assignment 2 – My Mark-making Development Portfolio.

Development of skills using the specified range of drawing media.

Learners will cover all specified media and all specified drawing techniques to build an annotated portfolio:

- introductory lecture followed by skills-building practice sessions in charcoal for life drawing; repeated for natural form; repeated for architectural drawing
- introductory lecture followed by skills-building practice sessions in pencil for life drawing; repeated for natural form; repeated for architectural drawing
- introductory lecture followed by skills-building practice sessions in pastel for life drawing; repeated for natural form; repeated for architectural drawing
- introductory lecture followed by skills-building practice sessions in wax crayon for life drawing; repeated for natural form; repeated for architectural drawing
- introductory lecture followed by skills-building practice sessions in pen and ink for life drawing; repeated for natural form; repeated for architectural drawing
- introductory lecture followed by skills-building practice sessions in marker pen for life drawing; repeated for natural form; repeated for architectural drawing
- introductory lecture followed by skills-building practice sessions in other mark-making implements for life drawing; repeated for natural form; repeated for architectural drawing.

Assignment 3 – Concept Art for the Game.

Task 1: anatomy

Learners will draw anatomy concept art poster montage showing annotated development drawings and final piece.

Task 2: environments

Learners will draw environment concept art poster montage showing annotated development drawings and final piece.

Task 3: objects

Learners will draw object concept art poster montage showing annotated development drawings and final piece.

Unit learning and assessment review.

Assessment

Evidence for assessment

Assessment evidence for this unit will come from practical drawing activities associated with work in the context of game development and is likely to comprise a combination of presentations, written reports, a portfolio or sketchbook showing development of drawing media skills plus annotated poster montages in response to given briefs.

Evidence for the achievement of learning outcome 1 could be an oral or electronic presentation, written report, research notes or evidence from case studies. Presentations must be recorded for the purposes of internal and external verification.

As evidence for the achievement of learning outcome 2, learners should produce a portfolio of mark-making studies demonstrating alternative representations covering the full range of materials and techniques as specified in the unit content. Each technique should be prepared with each of the materials studied. Learners should annotate each study with comments identifying the material and technique and commenting upon the suitability or otherwise of the effect.

Evidence for the achievement of learning outcomes 3 and 4 should consist of poster montages of game concept art drawn in response to given briefs (these may be any of original IP, franchised IP, or client brief). Concept art must cover each of the categories specified in the unit content: that is, there must be concept work for each of anatomy, environment and objects. Each poster montage must include development evidence and research studies leading to drawing of the final work. For learning outcome 4, sketchpad work should be extracted and combined to form the poster montages revealing development towards the final piece. The drawings should be annotated to comment upon purpose of final piece, idea sources and constraints. There should also be some reflective comment discussing fitness for purpose of the art piece and personal technical competence.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners at this level will give accurate and reasonably substantial descriptions of the purpose of game concept art in general terms, though these descriptions will be basic and conventional and might lack formal terminology. When describing concept art, a learner might write, 'Concept art is a kind of drawing used to give designers an idea of what the character or object should look like.' Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will demonstrate basic drawing skills, though they will have made repetitive use of the same materials and drawings will lack physical characteristics. For example, a basic line drawing will have no form or texture. Annotations will be brief and lack appreciation of limitation or best use. A learner might write, 'This is a pencil drawing of my house.'

3.1: learners will typically produce a series of unrelated studies which show limited progression of drawing skill and little appreciation of physical properties. Learners will have achieved something which will not fully realise what was intended, but the activity that led to it will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working.

4.1: presentation layout will be unimaginative and lack significant developmental evidence. Sketchpad work should be extracted and combined to form the poster montages. Each poster should include annotated development and research studies leading to drawing of the final work. Learners will make brief self-reflective comments on their own drawing work discussing fitness for purpose (considering client brief or target audience) and will write about their choices in selecting materials and techniques, commenting briefly on how they have developed their initial ideas to create concept art that satisfies the brief. Some suitable correct terminology must be evidenced. The learner might write, 'I drew my character using pencil line drawing technique. I think my drawing could be used for a storyboard. I got my initial idea from internet research.'

2.1, 3.1 and 4.1: when engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Concept Art for Games: What You Need to Know	An illustrated article on purpose of concept art for computer games for an online computer games ezine.	<ul style="list-style-type: none"> • All preparatory notes. • Illustrations. • Report document as word-processed or electronic presentation.
2.1	Assignment 2 – My Mark-making Development Portfolio	Development of a portfolio for job interviews.	<ul style="list-style-type: none"> • Development portfolio of mark-making studies.
3.1 4.1	Assignment 3 – Concept Art for the Game	Working as a creative within the industry, learner is briefed by supervisor to create concept art for a specified game.	<p>Concept art posters individually covering anatomy, environment and object, each containing montage of:</p> <ul style="list-style-type: none"> • development drawings • final piece • annotation including personal reflective comment.

Essential resources

For this unit learners will need to have access to a range of mark-making materials. Centres are strongly encouraged to seek a close relationship with at least one organisation in the game industry (publisher, design studio, distributor etc) which could be approached to provide exemplar concept art from past game titles, and possibly provide a visiting speaker.

For this unit learners will need to have access to a range of mark-making materials. Centres are strongly encouraged to seek a close relationship with at least one organisation in the game industry (publisher, design studio, distributor etc) which could be approached to provide exemplar concept art from past game titles, and possibly provide a visiting speaker.

Indicative resource materials

Textbooks

Ames L J — *Draw 50 Flowers, Trees and Other Plants* (Kingfisher Books, 2004) 978-1856974691

Barber B — *The Fundamentals of Drawing: A Complete Professional Course* (Arcturus Foulsham, 2003) 978-0572028794

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371

Edwards B — *The New Drawing on the Right Side of the Brain* (Harper Collins Publishers, 2001) 978-0007116454

Gray P — *The Complete Guide to Drawing and Illustration* (Arcturus Foulsham, 2006) 978-0572032319

Hamm J — *Drawing Scenery: Landscapes and Seascapes* (G P Putnam's Sons (Reissue), 2001) 978-0399508066

Mattesi M — *Force: Character Design from Life Drawing* (Focal Press 2008) 978-0240809939

Rines FM — *How to Draw Trees* (Dover Publications, 2007) 978-0486454573

Thompson K — *50 Fantasy Vehicles to Draw and Paint: Create Awe-Inspiring Crafts for Comic Books, Computer Games and Graphic Novels* (David & Charles PLC, 2007) 978-0715326831

Thompson K — *50 Robots to Draw and Paint: Create Fantastic Robot Characters for Comics, Computer Games and Graphic Novels* (David & Charles PLC, 2006) 978-0715324066

Woods J — *Draw and Sketch Buildings: Sketch with Confidence in 6 Steps or Less* (North Light Books, 2002) 978-1581803105

Websites

<http://conceptart.org> — community site with forums and showcasing concept art

<http://conceptartworld.com/> — community site offering concept art directory and blog

www.cgsociety.org — Computer Games Society website for digital artists: articles, workshops (short online courses), portfolios, gallery

www.drawingboard.org — forum and blogs of concept art

www.eatpoo.com — concept art gallery and forum

www.igda.org — home site of the International Game Developers' Association – all things game

www.skillset.org/games — Skillset is the Sector Skills Council for the creative media sector; website contains descriptions of concept artist job role and computer games developer art department

Unit 24: DVD Menu Design and Authoring

Unit code: Y/600/6626

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to provide learners with the knowledge, understanding and skills required to design and produce DVD menus. These might be for a specific commission or as part of the production of their own DVD products.

Unit introduction

The Digital Versatile Disc (DVD) format is becoming commonplace in the media sector. DVD provides so much more of an opportunity to produce the quality of image and sound so often lacking in tape-based formats. DVD also provides interactivity and allows for a range of additional material to be added to a project. Many feature film producers now provide 'extras' on their DVD products such as directors' commentaries, trailers, and 'how it was made' features. DVD can also provide an opportunity to add subtitles and a variety of dubbed languages. The graphic design element is important in the development of a DVD menu as still or moving images can be imported into a menu design as well as a choice of text styles.

The DVD formats provide an opportunity for learners to present their work in a new and exciting way. They can make a product and add extra features that demonstrate their skills in choice of material, re-editing skills and graphic design. Learners will be able to develop skills in designing the interactive elements of buttons and links to other material.

Authoring is the process of collecting audio, video, menus, subtitles and other material into an interactive branching structure that will eventually become a DVD, playable on a number of platforms. Learners will be able to gather their resources and produce their own DVD projects.

Learners will be able to use the skills developed in this unit to prepare DVD menus and finished DVD products for their moving image work. Learners may be able to take on a commission from another learner or a client who wants to produce their moving image product in an appropriate DVD format.

The DVD format allows learners to provide evidence of their evaluative skills as they may be able to add a commentary track to their product. This commentary track could provide them with a vehicle for talking about their choice of shot, style of editing or reasons for the initial idea.

This unit encourages learners to develop skills that will enable them to progress in the world of moving image and interactive media production.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand the applications and practice of DVD menu design and authoring	1.1	describe the applications and practice of DVD menu design and authoring with some appropriate use of subject terminology
2	Be able to design a DVD menu for an application	2.1	design a DVD menu working within appropriate conventions and with some assistance
3	Be able to produce a menu for a DVD.	3.1	produce a menu for a DVD working within appropriate conventions and with some assistance.

Unit content

1 Understand the applications and practice of DVD menu design and authoring

Conventions: +R; +RW -R; -RW; dual layer; writing speed; audio; video; menus; additional features, eg subtitles, different languages, text-based material, Easter eggs, animations, DTS (Digital Theatre Systems), Dolby; printable discs; regional codes; copyright protection; parental controls

Functions and elements: buttons; still images (graphics, photographs); moving images (film, animation); text; sound

Uses and applications: moving image; interactive media; text-based and image-based files; image slideshow; additional material and features

2 Be able to design a DVD menu for an application

Techniques: importing material; timelines; selecting images; selecting sound; creating text; chapterisation; links; rollover buttons; visual effects; sound effects

Technology: hardware; software; image manipulation; compression; digitisation

Elements: background; buttons (text, still images, moving footage); sound; graphics

Planning: ideas development; client liaison; time management; resources (time, budget, hardware, software)

3 Be able to produce a menu for a DVD

Production practices: client liaison; treatments; proposals; storyboard; scripts; schematics; production schedule; reviewing; modifying; copyright clearances

Elements: moving image material; sound material, eg music, voiceover; chapters; menu; additional material and features, eg commentaries, 'making of', production stills, crew and cast list, trailers; links to further material

Production: digitise content; import content, eg graphics, footage, sound; chapterising; design layouts and navigation; link content to menu; set first play; set end jump; set compression level; build and burn

Resources: time; budget; hardware; software; personnel, eg graphic designer, director, editor

Legal and ethical issues: copyright, eg images, music, text; regulation; classification; representation

Delivery

The teaching of this unit could start by inviting learners to explore a wide range of DVD styles and content in order to develop an understanding of the way they are put together. This should involve, first, getting to know the functions and design elements available to a designer of a DVD, second, looking at the way various codes and conventions are emerging in what is still a developing area of the interactive media industries and third, relating those codes and conventions to the different designs and applications of the DVD.

This might be done through a classroom viewing activity followed by discussion, or through learners finding relevant material for themselves and undertaking presentations on the examples they have found. DVD material is now available in many forms as is evidenced by the recent developments in interactive DVD design and the growth of film distribution on DVD format. Learners should bring into the classroom their own experiences of their investigations.

The practical aspect of this unit is likely to be taught through workshop-type activities based around the italicised sub-headings of the content for the learning outcomes. Learners can then present their moving image work on DVD format and, if possible, undertake this on a number of different projects. They may also be able to work to a client's brief using their skills to produce a DVD of someone else's work.

Once they have been given a brief, learners should work individually to design an appropriate menu and prepare the material for authoring.

If working to a client brief, learners must be encouraged to have a dialogue with their client and to develop ideas from the client's initial brief. They should experiment with ideas and give the client appropriate choices of style, format and techniques producing, if required, examples of their ideas.

Opportunities must be given for client and audience feedback on the menu design and suitability of the DVD programme.

Wherever possible, learners should visit DVD production companies or tutors should organise visits from DVD producers.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities

Introduction to unit and unit assessment.

Introduction to uses and applications:

- conventions
- functions and elements
- applications.

Assignment 1 – DVD Menu Design and Applications.

The brief is to produce an illustrated report on current practice in DVD menu design and authoring for a magazine.

Working in pairs and using the form provided to record their findings, learners will:

- identify the range of DVD types and applications of DVD menus
- identify how these applications are authored
- research a range of DVD menu designs to identify:
 - the ways in which the designer has tried to provide a useful menu
 - the functions and elements present in the menus
 - additional features
 - sound requirements
 - the structure of the menus
 - why the producers have chosen to design the menus as they have.

Working individually, learners will:

- collate all research and notes
- obtain illustrations
- design DVD menus
- produce an illustrated report with examples of own menu designs.

Learners will keep a production log throughout their work on this assignment.

Topics and suggested assignments and activities

Introduction to DVD menu design.

Learners will do a series of workshops covering:

- techniques
- technology
- elements
- planning.

Assignment 2 – Design a DVD Menu.

The brief is to produce a DVD menu for the college prospectus, which is being produced in DVD form as an experiment. The DVD is intended for year 10 students at the feeder schools.

Stage 1

Learners will:

- identify the techniques to be used in the design (eg timelines, sounds, rollover buttons, imported images)
- experiment with these techniques
- create a folder of appropriate material to be used in their own DVD menu design.

Stage 2

Learners will:

- identify the technology used to create DVD menus (eg image manipulation, compression)
- experiment with these techniques
- create a folder of appropriate material to be used in their own DVD menu design.

Stage 3

Learners will:

- identify the elements required for DVD menu design
- experiment with these techniques
- create a folder of appropriate material to be used in their own DVD menu design.

Stage 4

Learners will:

- identify the planning requirements for own DVD menu design using material provided by client (eg ideas development, time management).

Learners will keep a production log throughout their work on this assignment.

Topics and suggested assignments and activities

Introduction to DVD production.

Learners will do a series of workshops covering:

- production practices
- sourcing and creating elements
- production stages
- resources and logistics
- legal and ethical issues.

Assignment 3 – Produce a DVD Menu.

Learners will:

- liaise with client to discuss ideas
- obtain necessary elements (checking copyright where necessary)
- schedule the production
- complete production
- show finished DVD menu design to a client and audience focus group
- make changes, where necessary.

Learners will keep a production log throughout their work on this assignment.

Tutorial – learning and assessment review.

Assessment

Evidence for assessment

To achieve this unit, learners must provide individually generated evidence of achievement of the unit content.

The evidence for achievement of learning outcome 1 could take the form of an essay, a report, a presentation, an article for a magazine or a DVD producer's handbook that learners could use for reference when completing later tasks. Any oral presentations must be recorded for the purposes of internal and external verification.

Learning outcome 2 requires learners to produce a menu design and evidence for achievement of the learning outcome will therefore consist primarily of records of planning and experimental work. Learners must keep careful records of all activities such as meetings or pre-production work undertaken. Their experimentation could be recorded as part of an electronic log in the form of a DVD.

Learning outcome 3 requires learners to produce a menu for a DVD project using appropriate formats and techniques. The finished DVD will therefore provide the main evidence for achievement of learning outcome 3, although production logs should be submitted as part of the evidence. As part of the production process, learners should show their work to a client or audience and make changes where necessary, documenting this process accordingly.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must fulfil all the pass criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will describe the application of DVD menu design and authoring accurately but with limited detail. They will show some understanding of the forms of DVD products being produced and be able to identify in a limited way formats and techniques used. They will have some understanding of hardware and software systems. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will show some evidence of designing an appropriate DVD menu. They will have used appropriate techniques and technology and will have taken account of the main requirements of the design process though in limited detail. Learners will typically not have identified potential problems with the design process.

3.1: the finished DVD project will not fully realise the learner's intentions but it will have some sense of purpose and the deliberate application of technology and techniques behind its production.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the format within which they are working. Learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – DVD Menu Design and Applications	Learners have been briefed to produce an illustrated report on current practice in DVD menu design for a magazine.	<ul style="list-style-type: none"> • All research notes and completed forms. • Production log. • DVD.
2.1	Assignment 2 – Design a DVD Menu	Learners have been briefed to produce a DVD menu for the college prospectus, which is being produced in DVD form as an experiment. The DVD is intended for year 10 students at the feeder schools.	<ul style="list-style-type: none"> • Production log for design stage. • DVD of experimental work and initial ideas.
3.1	Assignment 3 – Produce a DVD Menu	As above.	<ul style="list-style-type: none"> • Production log. • Minutes of meetings with client. • Completed DVD. • Notes from focus group. • Tutor observation records.

Essential resources

Learners should have access to a wide range of DVD hardware and software of a professional standard.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

LaBarge R — *DVD Authoring and Production* (CMP Books, 2001) 978-1578200825

Laurel B — *The Art of Human/Computer Interface Design* (Addison Wesley, 1990) 978-0201517972

Rysinger L — *Exploring DVD Authoring: The Art and Technique of Designing Innovative Interactive DVDs* (Delmare, 2009) 978-1401880200

Unit 25: Film Studies

Unit code: T/600/6634

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to develop learners' understanding of how films are created for specific audiences and how they make meaning for those audiences through an exploration of industry practices and the application of a range of theoretical approaches. The insights which learners develop will inform their future production work.

Unit introduction

All approaches to studying film are theoretical to a greater or lesser extent. Even casual discussion about movies often reveals a recognition of and a cultural investment in, the auteur as the source of the film's meaning. A theoretical approach to film simply recognises that we need to consciously apply specific ways of responding to film texts in order to make our interpretation clear, not only to others but to ourselves as well. Done properly this is not merely an exercise in regurgitating theory: the effective application of theory and the use of specific analytical tools to produce different understandings of the same texts improves our understanding, enlivens our appreciation, and, for film practitioners, informs and enhances their production activity.

Through following this unit learners will develop an understanding of a number of theoretical approaches to film and apply them to specific films. Learners will come to understand that films do not exist in a vacuum, nor do they simply appear like flowers in the spring. Rather, they are created by a range of determinants and influences which include, amongst others, the culture and politics of the country where they are produced, the finance that enables their production, the technology of film production, distribution and exhibition, and the nature and structure of the industry which produces them.

In addition learners will explore the often complex relationship between audiences and films and will be able to understand why and how audiences watch and make sense of films in particular ways.

There are opportunities in the unit to develop and apply research techniques through the completion of a piece of practical audience research. The unit will also help to put production work done in other units into context.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Be able to apply different analytical approaches to films	1.1 apply approaches to analysing films with some appropriate use of subject terminology
2 Understand the relationship between films and their production contexts	2.1 describe the relationship between films and their production contexts with some appropriate use of subject terminology
3 Understand the relationship between producers and audiences	3.1 describe the relationship between producers and film audiences with some appropriate use of subject terminology
4 Understand the relationship between audiences and films.	4.1 describe the relationship between audiences and films with some appropriate use of subject terminology.

Unit content

1 Be able to apply different analytical approaches to films

Analytical approaches: methods, eg genre analysis, content analysis, narrative analysis, reception study, fan study; film theory, eg structuralism, semiotics, auteur theory, feminism, queer theory, Marxism, psychoanalytic

Application: to extracts; to whole films; to genres

2 Understand the relationship between films and their production contexts

Production contexts: Hollywood, Bollywood, British, developing countries, international co-productions, independent

Factors influencing the relationship: financial determinants; funding bodies; quotas; tax incentives; technologies of production, distribution and exhibition; trends; genres and cycles; stars; social and political issues; regulatory issues; synergies between different films; vertical and horizontal integration

3 Understand the relationship between producers and audiences

Relationship between producers and audiences: audience research; producer response to research; audience targeting; publicity and marketing, eg advertising, reviewing, chat shows, product tie-ins, premieres, awards, online presence; distribution

4 Understand the relationship between audiences and films

Relationship between audiences and films: active spectatorship; pleasure; frameworks of interpretation; media literacy; intertextuality; preferred readings; effects; fandom; interactivity; social networking; pre- and post-viewing experiences; conditions of reception, eg cinema, DVD release, online access

Delivery

Developing an understanding of different analytical models may appear daunting at first, but an accessible starting point could be to contrast a genre based approach with an *auteur* approach. The former provides insight through identifying recurrent significant elements (for example, in narrative, setting, iconography and character). The latter finds meaning through identifying the recognisable elements which signify the presence of a particular film 'artist'. Both require an awareness that audiences and producers use sets of codes and conventions in order to classify films.

Practice should be provided through, for example, exercises in which statements are matched with particular theoretical models to facilitate understanding of a range of writing about film. Abundant viewing of films and extracts, both in and out of class, is essential. Learners will also require opportunities to discuss 'ways of reading' in order to demonstrate an awareness that any act of interpretation is dependent on some kind of theoretical foundation.

Group work, presentations and producing visual material can all illustrate the various ways in which films are determined by, and respond to, their contexts of production. Examples might include the relationship between films and computer games, the agendas of film funding bodies, the rise and fall of particular film cycles and genres. Learners might also explore the influence of digital technology on production and costs, distributors voluntarily cutting films to fit a particular BBFC certificate and the evolution of the studio system. Other relevant activities would include audience research, simulations and production activity to indicate understanding of genre conventions.

Input from professionals working in film production, distribution or exhibition will be valuable for learners. Visits to film screenings and film festivals will also be beneficial as will contact with staff from agencies working to develop audiences for film in the UK. Access to production equipment will provide an opportunity to produce evidence in forms other than the written essay, whilst also making links with other units and areas of a learner's competence.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to the film industry with case study screenings of clips and whole films.
Introduction to film theory with case study screenings of clips and whole films.
Auteur theory – case study of one director with screening of 2 films.
Lecture sequence – genre, audience and industry: <ul style="list-style-type: none"> • ascribing films to genres: codes and conventions • how audiences choose films • the industry, genre and distribution • screenings of three films with class discussion.
Case study on genre and audience by learners.
Assignment 1 – Theory in Action. Learners produce a ‘talking heads’ video for a web site aimed at young people interested in film. The video will show how one specific theory and one method can be applied to a film and will be illustrated with stills and clips.
Production contexts: visiting speaker and screening of case study.
Lecture – research material for production context case study. Case study and screening.
Assignment 2 – Old Films for New. Learners will write an illustrated 800 word piece titled, ‘Old films for new,’ comparing a contemporary remake with the original version. The article must focus on production contexts and factors influencing that context (eg, financial determinants, technologies of production, distribution and exhibition, trends, genres, stars, social, political and regulatory issues, synergies between films, vertical and horizontal integration).
Producers, distributors and exhibitors – visit to a multiplex cinema.
What do producers do? Visiting speaker from a production company.

Topics and suggested assignments and activities

Assignment 3 – Bums on Seats.

Learners will write an article for a film magazine on the production and marketing of a blockbuster movie.

The article must focus on how the producer considered the target audience during production, and the publicity and marketing strategy for the film.

Lectures:

- audience theories and fandom
- reception theories.

Assignment 4 – Me and my Movies.

Learners will write an article on why they like a particular genre for a fan e-zine.

The article will cover:

- active spectatorship, fandom and preferred readings
- frameworks of interpretation, intertextuality and media literacy
- social networking, conditions of reception and pre- and post-viewing experiences.

Individual tutorials to review learning and assessment.

Assessment

Evidence for assessment

An obvious assessment instrument for this unit is the academic essay, for which titles and objects of study could be negotiated. An alternative is the formal presentation, which would include clips for analysis and similar expository content.

Reviews for a specific target audience, industry related research pieces and web content provide alternatives for the formal essay. For industry contexts, magazines or web sites aimed at specific audiences (such as fans or students) offer opportunities to provide evidence. Learners may also be able to produce a short video or audio piece to demonstrate their understanding of film.

As evidence for achievement of learning outcome 1 learners should apply at least two different analytical approaches, relating them to extracts, whole films, and genres.

Evidence for achievement of learning outcome 2 could be a case study of a single film or of several films, either written or presented orally.

Evidence for achievement of learning outcomes 3 and 4 could also be written pieces or short productions using a specific set of conventions. Another practical alternative for learning outcome 4 would be a piece of actual audience research in which a hypothesis is devised, research conducted and conclusions reached. Care should be taken to ensure that the proposed research is not too ambitious in scope. It should be quite possible for a modest piece of well-designed, theoretically informed piece of research to meet the distinction criterion.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Presentations and vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will demonstrate that they know about more than one approach to film analysis though the application will be implicit rather than explicit. Their application of theory will lead to the identification of possible meanings, although there will be little detail, and ideas or points made will be generalised and undeveloped. They will refer to whole films rather than specific elements of those films. In discussing codes and conventions in a genre analysis a learner might note, 'The knife is part of the iconography of the horror movie. In 12 of the 15 movies I studied for my content analysis a knife was used for at least one of the murders and in five it was used for all of them. Knives have connotations of the ordinary and the everyday, and are used for doing things like cutting up meat in the home. They also have connotations of danger because most people have cut themselves at some time in their lives so they know what it feels like.'

2.1: learners will describe aspects of the relationship between films and their production contexts. They will be able to give, for example, an accurate description of the Hollywood studio production system but they will not elaborate on how that system affects the films produced in such a system.

3.1: learners will offer a basic description of the types of research that film producers might carry out, and some of the ways in which audiences are made aware of a new production. Points made will be accurate and relevant but will not be elaborated.

4.1: learners will offer a basic description of the relationship between audiences and films but will be limited to a personal, subjective assessment of how this relationship affects responses. If audience research is carried out it is likely to be based on simple assumptions and to reach simplistic conclusions.

1.1, 2.1, 3.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Theory in Action	Learners produce a 'talking heads' video on a specific film for a website aimed at young people interested in film.	<ul style="list-style-type: none"> All research notes. Video.
2.1	Assignment 2 – Old Films for New	Learners write an illustrated article for a film magazine.	<ul style="list-style-type: none"> All research notes. Article.
3.1	Assignment 3 – Bums on Seats	Learners will write an article for a film magazine on the production and marketing of a blockbuster movie.	<ul style="list-style-type: none"> All research notes. Article.
4.1	Assignment 4 – Me and My Movies	Learners will write an article on why they like a particular genre for a fan ezine.	<ul style="list-style-type: none"> All research notes. Article.

Essential resources

Learners will need individual access to DVD or video players and monitors in an appropriate viewing area. They will need access to a DVD or video library containing copies of a wide range of film productions, including historical and contemporary films, mainstream and independent productions and film productions from a range of cultural and social contexts. Ideally these will be in the original cinematic format.

They will also need access to a library containing texts on media and film studies, magazines, newspapers, trade journals and specialist publications.

Indicative resource materials

Textbooks

Barker M, Arthurs J, and Harindranath R — *The Crash Controversy: Censorship, Campaigns and Film Reception* (Wallflower Press, 2001) 978-1903364154

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371

Bennett P, Hickman A, Wall P — *Film Studies, The Essential Resource*, (Routledge, 2007) 0415365686

Bordwell D and Thompson K — *Film Art: An Introduction, 4th Edition* (McGraw-Hill Inc, 2007) 0071101594

Buckland, W — *Teach Yourself Film Studies* (Hodder & Stoughton, 2008) 0340947322

Caughie J (editor) — *Theories of Authorship* (BFI, 1981) 0415025524

Clark V, Baker J and Lewis E — *Key Concepts and Skills for Media Studies* (Hodder & Stoughton, 2002,) 0340807849

Cook P — *The Cinema Book* (BFI, 2008) 1844571939

Hayward S — *Key Concepts in Cinema Studies* (Routledge, 1996) 0415107199

Hill A — *Shocking Entertainment: Viewer Response to Violent Movies* (John Libbey Media, 1997) 1860205259

Lacey N — *Introduction to Film* (Palgrave Macmillan, 2004) 1403916276

Monaco J — *How to Read a Film* (OUP, 2009) 0195321057

Murphy R (editor) — *The British Cinema Book* (BFI, 2009) 1844572757

Nelmes J (editor) — *An Introduction to Film Studies, 4th Edition* (Routledge, 2007) 0415409284

Shiach D — *Movie Stars* (Southwater, 2006) 184476205X

Journals

Empire

Flicks

Neon

Sight and Sound

The Cinema Business Magazine

Total Film

Websites

www.bbfc.co.uk — British Board of Film Classification

www.bfi.org.uk — the British Film Institute

www.cinema-sites.com — cinema sites

www.dir.yahoo.com/Entertainment/movie_and_Film — yahoo movie links

www.filmeducation.org — Film Education

www.filmeducation.org — Film Education

www.hollywood.com — Hollywood online

www.imagesjournal.com — Images, a journal of film and popular culture

www.imbd.co.uk — internet movie database

www.launchingfilms.com/cgi-bin/releases — the Film Distributors' Association

www.mrqe.com — the movie review search engine

www.online.socialchange.net.au/tcc/ — the cinema connection

www.screenonline.org.uk — *Screen* magazine

www.the-movie-times.com — *The Movie Times*

www.ukfilmcouncil.org.uk — the UK Film Council

Unit 26: Flash for Computer Games

Unit code: J/600/6637

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop learners' understanding of the use of Flash in computer games, and the skills to use Flash in the construction of games and ActionScript in game programming.

Unit introduction

Flash as a game development platform for casual games is an authoring tool which has grown considerably in power over the years. Flash can be used to create games as simple as noughts and crosses or as complicated as a real-time multiplayer game. Flash simplifies the visual side of programming computer games, works on almost every computer, and has a powerful and reasonably straightforward ActionScript programming language. Flash is a very good environment for learning basic game programming ideas.

Programming is what makes games interactive. The ActionScript language built into Flash lets the developer do anything that can be done with animation and many things that cannot be done by using animation techniques alone.

In this unit the learner will examine what is going on behind the scenes of a Flash game and how ActionScript is used to create and control objects directly rather than relying only on the Flash environment to control objects via animation. Learners will investigate how Flash is used in the creation of an interactive game. They will understand how Flash can control game physics and how Flash can be used to develop 2D and 3D isometric games for mobile devices and the web. Learners will use Flash tools and ActionScript to create a game.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the application of Flash to game development	1.1 describe the application of Flash to game development with some appropriate use of subject terminology
2 Be able to use Flash tools for game construction	2.1 apply Flash tools for game construction working within appropriate conventions and with some assistance
3 Be able to use ActionScript for game programming	3.1 apply ActionScript for game programming working within appropriate conventions and with some assistance
4 Be able to make a Flash game following industry practice.	4.1 make a Flash game following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand the application of Flash to game development

Flash for game development: Flash's integrated development environment (IDE); Flash Player

Game programming in Flash: advantages for game programming; ActionScript compared to animation; limitations of Flash; plug-ins; Flash variants and players, eg Flash Lite; coding conventions (file naming, camel case, punctuation, indentation); PC platforms (Flash); mobile platforms (Flash Lite)

Making games: making artificial worlds; importance of interactivity; objects; programmer as 'hidden' player

Planning Flash games: story; input devices; graphics; sound; importance of gameplay; game plan (main character, look and feel, game screens, screen objects, role of objects, behaviour of objects); game flowcharts

2 Be able to use Flash tools for game construction

Flash environment: workspace (stage, timeline, toolbar and panels, preferences, help)

Basic tools: drawing, eg pencil, line, pen, brush, shapes; free transform, eg rotate, skew, distort, scale, envelope, ruler and guidelines; editing, eg lasso, eraser, undo, copy, paste, duplicate, insert, delete, aligning, grouping, ungrouping

Objects: symbols, eg instances, duplicating symbols, swapping symbols, editing, grouping; buttons (creation, library, button states, code)

Colour tools: colour, eg colour properties, eyedropper, creating custom colours, colour swatches, stroke and fill

Text tools: text, eg editing, moving, rotating, reshaping, scrolling, creating text blocks, converting text to shapes

Animation: timeline (playhead, layers, frames, frame label, frame rate, keyframes, onion skinning, markers); frame manipulation, eg copying, deleting, reversal; testing movies; frame by frame animation; tweening (shape, motion)

Assets: importing, eg raster images, vector images, sound files, video files, movie clips; resizing; asset libraries

Advanced tools: scenes; guide layers; masking, eg mask layers, animated masks; timeline effects, eg blur, drop shadow, expand, explode, transform, transition; nesting movie clips; interactivity, eg scripting, behaviours, actions, triggers, buttons, rollovers, playback control, preloaders

Saving and exporting: saving; publishing; optimising; file formats; reasons for formats

3 Be able to use ActionScript for game programming

Basic: object-oriented programming, eg class, class definition, instances, properties and methods; syntax; pseudocode; testing; bugs and crashes

Text: static; dynamic; input; associating variables; reading input

Random numbers: math objects; dice

Decision making: conditions; false conditions; ELSE clause

Repeated behaviours: loops; arrays

Advanced: events; sprites; movie clips; objects, eg properties, functions, characteristics, dx and dy properties, onEnterFrame events; game boundary checking; cursor substitution; mouse tracking; artificial intelligence (AI); scorekeeping (text fields, winning and losing states); audio output; animated sprites, eg computer control, direction constants, turning, moving; user-controlled sprites, eg keyboard input, checking for motion keys; collision testing, eg checkCollisions() function

Vectors: eg vector conversion, vector projection in motion, centre of gravity, vector paths, calculating vectors (dx, dy, angle, length)

Game physics: eg velocity, acceleration, calculating distance, vectors, compensating for gravity, random integers, Newton's laws, objects in motion, traction

4 Be able to make a Flash game following industry practice

Game design: planning considerations, eg genre, interpreting creative brief, storyboarding, asset management

Asset preparation: graphical (sprites, backgrounds); behavioural (effects, objects, ActionScripts); sound, eg effects, music, ambience, dialogue; file types, eg bmp, gif, tiff, jpg, wav, midi, aiff, au, smp, mp3, ra, vox

Production: assets; ActionScripts; animation; game world; testing (alpha, beta, user testing)

Publishing: executables, eg PC platforms (Flash), mobile platforms (Flash Lite), internet

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, game design documentation, workflow and time management, technical competence, teamwork)

Delivery

It is suggested that teaching follows the order of the learning outcomes, starting with an introduction to the application of Flash to game development and following that with a study of Flash tools and ActionScript. Learners should be introduced to basic concepts of game physics and should have opportunities to examine and practise how these concepts are implemented in ActionScript. Learners can then produce a game in Flash incorporating scripts for interactivity.

This unit could be taught through a variety of activities, such as lectures, group discussions, Flash gameplay, practical sessions and demonstrations. The largest proportion of time should be spent in practical sessions using Flash and especially ActionScript. Using Flash will demonstrate to learners how 2D sprites can be used to give an illusion of 3D and how scrolling backgrounds are used to give an illusion of animation or movement. Learners will be expected to have a good working knowledge of Flash to produce and test a playable game. This can be achieved through practical demonstrations and exercises.

Formal lectures and independent study will be the main method used to develop understanding of the application of Flash. Learners will need access to Flash games (from websites, mobile devices or on disk) in order to study how Flash can be applied within the computer games industry. Learners should have the opportunity to study the use of Flash Lite for mobile games, since the mobile market is developing rapidly.

Learners must have access to Flash software to experience the use of Flash tools and the application of ActionScript to promote gameplay and interactivity. When providing Flash games for study, the .fla files should also be provided so that ActionScript commands and their effects can be studied.

Teaching of ActionScript is best done in short, carefully structured stages, each stage being reinforced with small practical projects which, when completed, allow progress to other stages. Tutors should strive to build a progressive library of games with corresponding ActionScript so that early, simple examples of script can be built upon, leading to the development of more powerful and usable scripts for games.

The production of a Flash game should be viewed as an opportunity to put into practice the skills and knowledge learned throughout the unit and should be viewed as the major piece of work for the unit. It is expected that learners follow good game design habits when producing their game. This is best achieved through learners planning their games on paper first before using Flash. Learners should record their planning and developmental work, as this can be used towards reflective practice. Learners may require access to other software (for example, a graphics package in order to prepare suitable assets).

Reflective practice is an important part of games development and design. Learners should be encouraged to compare their completed game with their original intentions. This can be achieved through self-evaluation (using techniques such as peer and client testing) and recorded in a report.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to the Flash IDE and Flash's usefulness in building games. Learners: <ul style="list-style-type: none">• attend lectures and tutor-led demonstrations explaining the Flash IDE and introducing Flash Player• attend lectures discussing advantages and disadvantages of Flash for game programming• attend lectures to remind them of important considerations when designing a game• attend lectures to explain elements to consider when planning a Flash game• conduct private study practising the planning of a Flash game by generating ideas for story, input devices, graphics, sound, gameplay, game plan (main character, look and feel, game screens, screen objects, role of objects, behaviour of objects), drawing game flowcharts.
Assignment 1 – Flash for Computer Games: What You Need to Know. Learners will write an article for an online games ezine on using Flash to build computer games, its advantages and disadvantages.

Topics and suggested assignments and activities

Introduction to Flash interface and tools.

Learners will:

- attend lectures and do directed tutor-led practical work examining the graphics tools available in Flash
 - Flash environment, basic tools and objects, saving
 - colour tools and text tools
 - animation and assets
 - advanced tools
- conduct private study experimenting and developing skills in using Flash interface and graphical tools.

Introduction to ActionScript.

Learners will:

- attend lectures and do extensive directed tutor-led practical work examining the ActionScript language available in Flash, especially scripts useful for game programming:
 - basic
 - text
 - random numbers
 - decision making
 - repeated behaviours
 - advanced: events, sprites, movie clips, objects
 - advanced: game boundary checking
 - advanced: cursor substitution and mouse tracking
 - advanced: scorekeeping
 - advanced: keyboard input
 - advanced: animated sprites
 - advanced: user-controlled sprites
 - advanced: collision testing
 - vectors and physics
- conduct private study experimenting and developing skills in using ActionScript.

Topics and suggested assignments and activities

Assignment 2 – My Flash Game.

Learners receive a brief from a client to devise and make a playable demonstration of a web-based advergame to promote a specified product.

Learners will:

- prepare a portfolio in which they:
 - generate a brief specification for a Flash game
 - create or locate the sound, graphical and script assets for the game
 - use the Flash interface to make a playable demonstration of their game specification
 - publish the game as an executable file for PC, internet or mobile
 - review their own work.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of learning outcome 1 of this unit can be drawn from presentations both written and oral. Oral presentations must be recorded for the purposes of internal and external verification. The learner may present researched information; research could include extracts from books, journals, articles, material published on the internet or trade publications. Evidence relating to learning outcome 1 might also be presented in the form of wiki articles created by learners.

Evidence for achievement of learning outcomes 2 and 3 may be drawn from the final game produced as evidence for learning outcome 4, but in this case there must be additional supporting evidence explaining why tools have been chosen and how they have been used, and explaining in detail what ActionScript has been used and why. Checklists of available tools or scripts showing where they have been used are in themselves not sufficient to demonstrate achievement of learning outcomes 2 and 3; again, these must be supported by additional annotation explaining their use. Documentation could be presented as annotated screen grabs or via screen capture software with voiceover. Comprehensive, authenticated logs supported by other materials might be alternative suitable vehicles.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit, learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe the application of Flash to game development including reference to Flash as an integrated development environment (IDE) and discussing advantages and limitations of Flash for game programming. Additionally, learners will describe the basics of making games and planning requirements for Flash games. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will have generated a Flash game which uses some of the key characteristics of the software in simple and conventional ways. Learners' use of the software tools will be basic and restricted to tools such as environment, drawing, text, colour, animation, saving and exporting. Learners will, as a minimum, have identified where tools have been used. This evidence could be presented via a document with screen grabs and annotation, or perhaps screen capture software with voiceover.

3.1: learners will have applied elementary ActionScripts which provide some player interactivity and control, and which enable a basic level of gameplay. Learners' application of ActionScript will be basic – for example, scripts to control animation, control movie clips, make user-controlled buttons, play sounds and identify keyboard input.

4.1: learners will have achieved a finished working game which is playable though limited and conventional. The final product will not have realised learners' full intentions but work on the game will have been purposeful and the outcome will reflect some interpretation of the brief and some elementary planning of game design, and will evidence the deliberate application of Flash tools and ActionScript. Following industry practice, some attempt to reflect on the product will have been made, moving some way beyond merely describing their work. Some user testing of the final product must be evidenced, typically by inclusion of user comments within reflective practice. Evaluative comments will be assertions that are not supported by evidence or exemplification.

2.1, 3.1 and 4.1: learners may need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Flash for Computer Games: What You Need to Know	Article for online games ezine on using Flash to build computer games.	<ul style="list-style-type: none"> All preparatory notes. Article as word-processed or electronic document.

Criteria covered	Assignment title	Scenario	Assessment method
2.1 3.1 4.1	Assignment 2 – My Flash Game	Brief from a client to devise and make a playable demonstration of a web-based advergame to promote a product.	<ul style="list-style-type: none"> • A concise design specification. • A file of assets (graphical, ActionScripts and sounds). • A concise production diary evidencing use of Flash tools and ActionScripts. • Final playable published game. • Brief reflective comment.

Essential resources

For this unit learners will need access to appropriate hardware and Adobe Flash software and any other relevant industrial-standard software. Learners should have access to relevant software manufacturers' manuals, textbooks, the internet and a library of examples of current Flash Games and ActionScripts.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe Flash CS4 Professional Classroom in a Book* (Adobe, 2008) 978-0321573827

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371

Besley K — *Flash MX 2004 Games Most Wanted* (APress, 2004) 978-1590592366

Green T and Chilcott J — *Macromedia Flash 8 Professional: Training from the Source* (Macromedia, 2005) 978-0321384034

Harris A — *Beginning Flash Game Programming for Dummies* (Wiley Publishing, 2006) 978-0764589621

Hoekman R — *Flash Out of the Box* (O'Reilly, 2004) 978-0596006914

Kerman P — *Sams Teach Yourself Macromedia Flash MX2004 in 24 Hours* (Sams, 2003) 978-0672325946

Makar J and Sosinsky B — *Macromedia Flash MX Game Design Demystified* (Macromedia, 2004) 978-0735713987

Moock C — *Essential ActionScript 2.0* (O'Reilly, 2004) 978-0596006525

Moock C — *Essential ActionScript 3.0* (O'Reilly, 2007) 978-0596526948

Peters K — *Foundation ActionScript Animation: Making Things Move!* (Friends of Ed, 2005) 978-1590595183

Rhodes G — *Macromedia Flash Professional 8 Game Development* (Charles River Media Game Development, 2006) 978-1584504870

Rosenzweig G — *Macromedia Flash MX ActionScript for Fun and Games* (Que, 2002) 978-0789727992

Ulrich K — *Flash CS3 Professional for Windows and Macintosh: Visual QuickStart Guide* (Peachpit Press, 2007) 978-0321502919

Ulrich K — *Macromedia Flash 8 for Windows and Macintosh: Visual QuickStart Guide* (Peachpit Press, 2006) 978-0321349637

Websites

www.adobe.com — the website of this software manufacturer contains useful information and resources, including training materials, forums, downloadable trial software and players, news etc

www.ferryhalim.com/orisinal — free Flash games resource

www.flashadvisor.com — Flash games resource, tutorials, animations, ActionScripts, Flash movies and sound loops

www.flash-game.net — a resources site with more than 3000 free games and online games including sports games, action games, puzzle games, Flash games and multiplayer games

www.flashkit.com — a resources site for Flash developers which includes reviews, sound loops and tutorials

www.flashkit.com — excellent Flash tutorials and forum

www.flzone.net — tutorials from ActionScript to web design

www.tutorialized.com/tutorials/Flash/Games/1 — Flash games resource, tutorials, animations, ActionScripts

Unit 27: Graphic Narrative Production

Unit code: J/600/6640

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to enable learners to develop skills in the production of two-dimensional graphic narratives and apply sequential art effectively through an understanding of the principles of character, dialogue, and plot by means of visual story telling. Learners will develop transferable skills which could be applied across a vast area of visual communications such as film, television, photographic applications, animation, computer graphics and print media.

Unit introduction

Graphic narratives exist in a variety of formats such as comic books, graphic novels, cartoon strips, children's books, photo-stories, packaging, advertising, publicity material and in digital media such as CD ROMs and the worldwide web (web comics). They represent a form of fiction that tells a story in a sequential, graphic narrative. Additionally, many other kinds of media products are originally thought out and explored using two-dimensional visual techniques. An example of this would be storyboards, typically used to create scenes and sequences for film and television. They ensure that a particular storyline or series of related actions comes together to create meaning and has the desired effect. Storyboards can bring the script to life visually and need to consider such devices as camera angles and movement, points of view and lighting.

Stories fill our lives and the creation of a story in its basic form involves the construction of a series of events, conflicts and resolutions. Defined by characters and settings, narrative can be presented typically in myths, fairy tales, legends and histories but, through innovation, narratives can be placed within a variety of contexts and manipulated to create a variety of meanings.

Genres such as manga from Japan and other more mature graphic novels have inspired a new generation of people who are being enthused by the medium. The synergy with blockbuster style movies and video games is becoming more apparent and comic books often reference the same kind of dynamic visualisation found in film and television narratives.

This unit gives learners an opportunity to focus on the production of two-dimensional graphic narratives. They will be able to apply their own ideas and creativity to produce a range of narratives using a variety of different two-dimensional production methods. Learners may choose to produce a stand-alone graphic narrative product such as a comic book, children's book or a series of cartoon strips, or plan narratives for other productions such as television drama, film or animation. Learners may wish to explore the more innovative graphic novel styles which push the conventions of the visual frame and draw the reader into a new world no longer governed by the rules of traditional visual story telling.

It is important that learners are able to show the development of their work and include all the relevant planning material and notes, such as original scripts and sketches, research, feedback and product development. Learners will need to apply sequential art effectively and understand the principles of character, dialogue and plot through visual story telling. The work produced for this unit will develop learners' technical skills to enable understanding of portrayal and expression of narrative.

Learners will develop transferable skills which could be applied across a vast area of visual communications such as film, television, photographic applications, animation, computer graphics and print media.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Be able to develop ideas and designs for graphic narratives	1.1	produce ideas and designs for graphic narratives working within appropriate conventions and with some assistance
2	Be able to use appropriate technology and processes to produce graphic narratives	2.1	produce graphic narrative products using appropriate technology and processes, working within appropriate conventions and with some assistance
3	Be able to reflect upon own graphic narrative work.	3.1	comment on own graphic narrative work with some appropriate use of subject terminology.

Unit content

1 Be able to develop ideas and designs for graphic narratives

Ideas generation: creative thinking, eg mind-mapping, brainstorming, group discussion; research, eg past and current commercial practice; responses to a brief; feedback collection; ideas presentation; recording ideas, eg notes, scripts, sketches, collages, trial examples, flip books

Design origination: initial planning, eg thumbnails, ideas sheets; flip books, storyboards, scripts; concept drawings, eg using text, typography, illustration, line, tone, colour; awareness of hand, mechanical and digital means, eg use of design software for image and text construction and manipulation

Media: publications, eg books, newspapers, magazines, TV, film, CD ROMs, internet; formats, eg illustration, cartoons, comic strips, flick books, photo-stories, storyboards, film, video, animation; new technologies, eg computer animation, interactive media

Considerations: costs; available resources; quantity; audience; target market; quality factors; codes of practice; regulation; legal issues, eg copyright; ethical issues

Pre-production: eg budget, resources, time, personnel, clearances, health and safety

2 Be able to use appropriate technology and processes to produce graphic narratives

Digital: desktop publishing; image manipulation; illustration software; web applications; CD ROM; digital presentations; photographic material; one-off or multiple form, eg photocopying, laser printing

Hand: eg drawing, painting, collage, etching, engraving, direct lithography, linocut, collotype, screen print, mixed media

Mechanical: eg gravure, screen process, offset lithography, web, flexography, letterpress, film-based photography, digital photography

Contexts: eg newspaper production, magazine production, publicity material, packaging, comics, books, flyers, posters, cartoons, fine art print, web comics

Health and safety: Control of Substances Hazardous to Health (COSHH) regulations; display screen equipment regulations; safe practices in studios and workshops

3 Be able to reflect upon own graphic narrative work

Narrative structure: types of structure, eg open, closed, single strand, multi-strand, linear, nonlinear, realist, anti-realist, non-narrative; components, eg opening, conflict, resolution, cause and effect, enigma, equilibrium, climax, motivations, manipulation of time and space

Image construction: eg form, texture, shape, pattern, line, tone, colour; anchorage, eg captions, slogan, combination of words-images-text; signification, eg technical codes, symbolic codes, cultural codes, connotation; representation, eg of gender, of race, of age, of sexuality, of class, of social groups, of societies, of cultures, of religions

Historical and cultural context: range of references, eg society, race, religion, politics, economics, art and design, popular culture, technology

Production processes: technical competencies; creative ability; time management, responding to feedback

Delivery

This unit could be taught as a series of integrated visual communication projects. These projects should allow for developmental work to support other units but maintain a focus on the creation of two-dimensional graphic narratives. Working to a real or simulated client brief would support vocational relevance and learners should have the opportunity to present their ideas and work in progress to a notional client, allowing them to understand the relevant constraints and respond to feedback. Learners should experience progress through realistic stages of working on a brief, such as conducting research, meeting the client and presenting drafts, conducting focus groups, responding to a range of feedback and monitoring the development of their work and progress.

All projects in this unit should be supported by ongoing technical exploration of media, materials and processes. Learners should be asked to keep a notebook or annotated images folder to provide further evidence of understanding and creative control. Tasks to create awareness of compositional elements, aesthetics and contextual issues such as representation and semiotics, should be introduced alongside technical tasks, offering clear aims for production. In order to inform this process, learners should be able to explore the way that production processes work through practical 'hands-on' experience, experimenting with drafts and different applications.

Finished products could include a photo-story (produced for a teenage magazine), and a cartoon strip (produced for a newspaper or comic book). These products are, by convention, sometimes short and concise and where learners engage with such material a series, including a run of examples, should be produced. A portfolio might contain a short, illustrated children's book or graphic novel, allowing learners to apply a variety of techniques when exploring narrative production. A series of storyboarded sequences would, in each case, allow for diversity within learners' work and applications.

Whilst there is a strong practical element to this unit, learners need to be aware that in media production, technical skills and expertise cannot necessarily make up for lack of narrative considerations, and teaching should create opportunities to debate and explore this concept, using examples to illustrate points. Learners should be introduced to a wide range of graphic narrative products, both historical and contemporary, and should develop the confidence to analyse these, both in terms of their historical context and also in terms of fitness for purpose and production techniques.

One important element in the teaching of this unit is to ensure that all learners have the opportunity to discuss their own responses to graphic narratives and to bring in examples of what they themselves enjoy. This could lead to a debate that looks at the role and function of graphic narrative production and its impact and influence on today's world.

The learner's own work, and the work of others, will need to be approached using appropriate visual language, analysing narrative structures, the visualisation of the narrative, the suggested audience or consumer and the likelihood of products being effective and successful. Learners should here draw on their experiences of analysing media texts in other parts of their course. In this way learners should develop a thoughtful and well-informed response to the constructed narratives that form an integral part of everyday life.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introductions to: <ul style="list-style-type: none"> • graphic narratives – designed to meet the needs of audience or client • the role of a written proposal for a graphic narrative • ideas generation – mind-mapping around themes • the role of research within the production process • the role of pre-production within the production process • planning material and pre-production techniques.
Exercise – learners prepare and present an analysis of a chosen existing graphic narrative to group.
Visiting speaker – producer or production manager from industry.
Workshop – learners study pre-production material and documentation from an existing production.

Topics and suggested assignments and activities

Assignment 1 – Any Ideas?

Learners receive a brief to produce a graphic narrative version of a novel.

Learners will:

- generate ideas for graphic narrative
- generate content material (initial sketches, designs, drafts etc)
- develop chosen idea into a proposal.

Learners then complete pre-production work with consideration of:

- budget
- time
- personnel
- resources
- clearances
- health and safety
- possible impact of codes of practice and regulation.

Assignment 2 – Get It Made.

Following on from Assignment 2, learners apply production techniques to create the product:

- manipulate and arrange content
- present interim production work to client (or audience) to gain feedback
- post-production – finishing touches
- present final production work to client (or audience) for responses.

Assignment 3 – Did It Work?

Learners write evaluation of own graphic narrative production work covering:

- narrative structure
- image construction
- historical and cultural contexts
- production processes.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of the learning outcomes should be generated through research, pre-production, practical examples and evaluation. The range of final graphic narratives produced should be fully supported by planning material and concept sheets, with a rationale for the selection of techniques and technologies.

Evidence for achievement of learning outcome 1 will be the learner's developmental work. Through experimentation with a range of techniques, learners should prepare a number of ideas that could form the basis of a series of graphic narratives. These may be developed from their existing work or originated from a series of briefs specially devised for this unit. Evidence for ideas generation and design origination should be presented in appropriate formats, such as sketchbooks, notebooks, developmental images, and thumbnails.

Evidence for achievement of learning outcome 2 will most likely come from the culmination of investigation, planning and production work resulting in a portfolio showing a range of completed examples of graphic narratives, originated by the learner. Learners will need to keep and present all appropriate associated supporting work that should show the different stages of progress and development. It is to be expected that practical examples will include digital formats (produced using digital applications or indeed digital products themselves such as web comics) as well as ideas that are explored using traditional illustration.

Evidence for achievement of learning outcome 3 might be in the form of a written evaluation, a presentation or an audio or audio-visual recording or presentation, supported by sketchbooks, notebooks, developmental images, screen-grabs, annotated printouts and test prints. Presentations must be recorded for the purposes of internal and external verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1 and 2.1: learners will produce ideas and designs for graphic narratives that have then been further developed and incorporated into graphic narrative products using appropriate technology and processes. What is achieved will not fully realise what was intended, but the activity will have at least been purposeful with the result that the outcome has some sense of design and the deliberate application of some appropriate techniques behind it. The range of material produced may be limited but should include the application of both traditional and digital methods. In terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners may require frequent assistance, support and encouragement. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

3.1: learners will consider their own work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification. Descriptions of narrative production work may be undeveloped with learners using basic but appropriate visual language when referring to their own work. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Any Ideas?	A publisher commissions a graphic narrative version of a novel.	<ul style="list-style-type: none"> • All ideas notes, sketches and drafts. • Written proposal. • Tutor observation notes. • Project portfolio containing all pre-production documentation. • Tutor observation notes.

Criteria covered	Assignment title	Scenario	Assessment method
2.1	Assignment 2 – Get It Made	As above.	<ul style="list-style-type: none"> Completed product. Production log. Tutor observation notes.
3.1	Assignment 3 – Did It Work?	As above.	<ul style="list-style-type: none"> Learner report reviewing strengths and weaknesses. Tutor observation notes.

Essential resources

Learners should have appropriate access to relevant technical resources for the selected medium, the precise resources required depending on which medium learners work in for their production project. All resources must be up to date, and of near-industrial standard and capability. A wide range of two-dimensional graphic narratives should be used for class reviews, helping to create an understanding of what constitutes effective narratives and those which are less successful in their ambitions. Learners will need access to a library or media centre having internet facilities.

Indicative resource materials

Textbooks

978-0823099924

Bann D — *The All New Print Production Handbook* (Watson-Guptill Publications, 2007)

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Berger A — *Narratives in Popular Culture, Media and Everyday Life* (Sage Publications, 1996) 978-0761903451

Billen M — *Web Design 4: Web Designer* (Image Publishing, 2009) 978-1906078232

Branston G and Stafford R — *The Media Student's Book* (Routledge, 2006) 978-0415371438

Canemaker J — *Paper Dreams: The Art and Artists of Disney Storyboards*

(Hyperion, 1999) 978-0786863075

Caputo T — *Visual Storytelling: the Art and Technique* (Watson-Guption Publications, 2002) 978-0823003174

Chapman J and Chapman N — *Digital Multimedia* (John Wiley & Sons, 2009) 978-0470512166

Cope P — *Web Photoshop: Start Here!* (Ilex, 2003) 978-1904705048

Eisner W — *Graphic Storytelling and Visual Narrative* (W. W. Norton & Co, 2008) 978-0393331271

Fiell C and P — *Graphic Design for the 21st Century* (Taschen, 2003) 978-3822816059

Flint M et al — *User's Guide to Copyright* (Tottel Publishing, 2006) 978-1845920685

Gordon B and Gordon M — *The Complete Guide to Digital Graphic Design* (Thames & Hudson, 2005) 978-0500285602

Hart J — *Storyboarding for Film, TV and Animation* (Focal Press, 1999) 978-0240803296

Kindem G and Musburger R — *Introduction to Media Production* (Focal Press 2009) 978-0240810829

Krisztian G and Schlempp-Ülker N — *Visualizing Ideas: From Scribbles to Storyboards* (Thames & Hudson Ltd, 2006) 978-0500286128

McCloud S — *Making Comics: Storytelling Secrets of Comics, Manga, and Graphic Novels* (Harper Paperbacks, 2008) 978-1435261945

McCloud S — *Understanding Comics* (Harper Paperbacks, 2008) 978-1435242845

Millerson C and Owens J — *Production Handbook* (Focal Press, 2008) 978-0240520803

Sabin R — *Comics, Comix & Graphic Novels: A History of Comic Art* (Phaidon Press, 2001) 978-0714839936

Tumminello W — *Exploring Storyboarding* (Delmar, 2004) 978-1401827151

Varnum R — *The Language of Comics: Word and Image* (University Press of Mississippi, 2002) 978-1578064137

Journals

Creative Review Centaur

Websites

www.adobemag.com — Adobe magazine

www.artsandlibraries.org.uk — Arts and Libraries

www.artscouncil.org.uk — Arts Council of England

www.bbc.co.uk — provides access to related resources via its own subdirectory

www.bugpowder.com — UK small press comics community

www.cartooncentre.com — the Cartoon Museum exhibits examples of British cartoons, caricature, and comic art from the 18th century to the present day

www.ccc.acw.org.uk — Arts Council of Wales

www.comicsresearch.org — detailed information and guidance on further research

www.creativereview.co.uk — online magazine for visual communication

www.englishandmedia.co.uk — English and Media Centre website, containing resources and publications

www.hse.gov.uk — the Health and Safety Executive

www.medialearners.com — information about media industries, production

www.mediastudents.com — information about media industries, production, qualifications, and an extensive database of links to other relevant sites

www.publishers.org.uk — the Publishing Association

www.rps.org — Royal Photographic Society

www.scottmcloud.com — author bringing comics to life with books and web comics which explore issues of representation and the creation of graphic narratives

www.sharedteaching.com — free website for teachers and learners

www.skillset.org — the Sector Skills Council for the creative media sector, references a wide range of supportive advice and material relative to employment and media industries

www.theaoi.com — the Association of Illustrators, illustration resources for commissioners and practitioners

www.theory.org.uk/student-tips.htm — website offering a set of original online resources and relative links

Unit 28: Interactive Media Design

Unit code: J/502/5680

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop learners' understanding of and skills in interactive media design. Learners will explore copyright, ownership and the various laws which apply to interactive media design work. They will learn how to apply design principles to create interactive projects.

Unit introduction

The interactive media industry is one of the fastest moving sectors in the world. It creates a wide range of products for different purposes including websites, interactive CDs, DVDs, kiosks, games and interactive television. Those hoping to make a career in this sector will need creativity, a firm grasp of interactive media design principles and good planning skills. The qualities and skills developed in this unit are applicable to all of the various strands within the interactive media sector.

Understanding what makes a good interactive media product which complies with current legislation and best practice is fundamental to a successful career in the interactive media industry. Equally important is to know how to go about making a product on time to meet the client's needs. This unit deals with the practices and methods employed in the interactive media industry to meet these requirements. It will enable learners to develop the core skills and knowledge which will lay the foundation for further development in other specialised units which they choose to study.

By studying this unit learners will develop their understanding of core ideas underlying the design of interactive media products. Examination of fundamental concepts of graphics with study of the interactivity and navigation present in interactive products will provide a solid foundation upon which to build the skills of other more practical units. To ensure that their final products from other units are both legal and ethical they will also learn about important issues such as copyright, ownership and the various laws which apply to interactive media design. They will learn how to devise professional products by applying established design principles and

developing core skills to support authoring skills of other units. They will be encouraged to develop and apply creative thinking skills and will learn how to plan and manage projects to make sure that they become a reality on time. This unit will also develop the learners' ability to reflect critically on their own work, as they will need this professional skill in any future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the principles of interactive media design	1.1 summarise accurately the principles of design applied to interactive media products with some appropriate use of subject terminology
2 Understand legal and ethical constraints applicable to the interactive media industry	2.1 describe legal and ethical constraints that apply to interactive media products with some appropriate use of subject terminology
3 Be able to apply interactive media design following industry practice.	3.1 apply interactive media design following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand the principles of interactive media design

Graphic design: colour theory; composition, eg rule of thirds, lead lines, focal point, depth of field; balance, eg white space, grey space, black space; typography, eg fonts and font families; aesthetic appeal; context, eg visual style, accessibility

Interactive design: audience, eg experience, age, accessibility, language and terminology; content (text, graphics, animation, sound, interactivity); semiotics (words, sounds, colours, images); form (uncluttered, consistent, continuity, eg amount of information presented, grouping and prioritising of information)

Navigational design: use of navigation, eg good and bad navigation, navigation types, global, local and linking (primary, secondary, tertiary); visual cues, eg highlighted text, attracting attention, identifying, prioritising; usability, eg simple, effective, tolerant (error undo, input redo)

Technology: interactive products, eg web pages, CDs, DVDs, kiosks, motion graphics, animation, special effects, games; content platforms, eg websites, computers, mobile devices, kiosks, interactive television; application tools, eg audio-visual presentation software, web editor, authoring software, animation software

2 Understand legal and ethical constraints applicable to the interactive media industry

Legal: intellectual property rights, eg copyright, design rights, moral and paternal rights, trademarks, patents; permissions; libel; Race Relations Act; Obscene Publications Act; Computer Misuse Act; Data Protection Act; accessibility; contracts, eg contract types, sub-contracting, outsourcing, working to a brief, penalties

Ethical: relationship with client (respecting client wishes, listening to needs); authorship and ownership issues; representation, eg race, gender, age; blasphemy; effects debates

3 Be able to apply interactive media design following industry practice

Analysis: stimulus, eg client brief, own brief; client communication, eg meeting notes, recording responses to questioning; final specification

Creative thinking skills: brainstorming; mind maps; storyboards; mood boards; creative problem solving tools, eg attribute listing, morphological analysis, SWOT

Planning techniques: layout, eg sketches, storyboards, wireframes, script; information architecture; visual style; colour palettes; typography; workflow (shortcuts, working between programmes, efficient time management); deadlines (production milestones); management tools

Documentation skills: purpose, eg treatment, specification; content, eg introduction, product size, product scope, visual style, storyboard, thumbnails, layout, concept art, script; structure, eg cover sheet, logo, contact details, summary, sections; style, eg tone of voice, technical language; quality, eg word processed, spellchecked, proofread

Industry practice: recording intended outcome (project brief, self generated specification); recording plans (work breakdown, schedule, contingency); daily diary (feelings, work done, productivity achieved, monitoring, revisions made, contingencies employed); test final product (self, others, record opinions); evaluate final product (technical quality, aesthetic quality, against original intention); evaluate production skills (technical skills, workflow and time management skills)

Delivery

This unit is intended to enable learners to develop an understanding of current interactive media design practice and to apply it to their own working.

Learners should be allowed to develop an understanding of interactive media product design through investigation of existing products. To enable this it would be sensible to cover principles of interactive media design at the start of teaching. There could be initial tutor-led teaching backed up with individual or group work. Good practice here would be to use case studies to demonstrate good and bad designs (existing websites, PowerPoint presentations, for example, demonstrating both good and bad practice). A helpful approach may be to interweave principles and practice wherever possible, showing the impact of developing good practice by applying principles. Learners could then investigate a range of existing interactive media products (web-based, CD, DVD, mobile phone, game etc) and evaluate the design principles observed (layout, use of colours, fonts, interactivity etc). One method of doing this would be to encourage learners to design a form to record facts and comments about each of the products. In addition to evaluating the products, learners would be gaining experience of research of existing products and could be asked to record details of ideas they have picked up which could be used in future projects. The assessment could include presentations in which learners highlight their key findings; this will serve to develop important skills such as summarising and presenting information.

Learners should be able to demonstrate their understanding and knowledge of interactive media design practice through the production of appropriate interactive media products. This could be through work produced for other units in the pathway or through a discrete product completed as an exercise.

A typical approach to teaching of interactive media practices might be to use the first part of a session to explain the rules or how to perform a particular activity; the remainder of the session should be used to actually develop the skills (for example, teach rules of brainstorming and then provide examples for learners to practise). It is appropriate to encourage group work when possible, particularly for the creative thinking exercises, and it is recommended to rotate group membership to encourage the sharing of ideas throughout the whole course group. Peer evaluation of practice should also be promoted (for example, obtaining feedback from other learners on the design of a screen layout or the composition of a digital image). At all times learners should be made aware of professional practice and how legal and ethical constraints affect their work.

This unit could also be taught through a series of workshops. These workshops could be integrated into other units in this pathway, allowing learners to demonstrate their understanding and knowledge of interactive media practices.

It would be beneficial to invite interactive media professionals to demonstrate and discuss their work and working practices with learners, and for learners to visit interactive media practitioners.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to principles of interactive media design.
Tutor-led case study examinations of good and bad design.
Group work investigation of existing interactive media products, noting evaluative comments and completion of analysis forms recording facts, comments and notes of ideas observed with comment on potential for future use.
<p>Assignment 1 – Interactive Media Design: What You Need to Know.</p> <p>Learners will write an article on principles of interactive media design for an online media careers ezine.</p> <p>The article must cover:</p> <ul style="list-style-type: none"> • graphic design • interactive design • navigational design • technology • usefulness of this understanding for work.
<p>Introduction to legal and ethical constraints.</p> <p>Learners:</p> <ul style="list-style-type: none"> • receive lectures and conduct guided investigation and research into legal constraints in the interactive media industry • receive lectures and conduct guided investigation and research into ethical constraints applicable in the interactive media industry.

Topics and suggested assignments and activities

Assignment 2 – Legal and Ethical Constraints in the Interactive Media Industry.

Learners will write an article on legal and ethical considerations relevant to working in the interactive media industry for an online media careers ezine.

The article must cover:

- intellectual property rights
- permissions
- libel and issues of sensitivity to other social groups
- relevant acts of parliament
- relevant employment law
- relationship with client
- representation
- effects debates.

Introduction to forms of enhancing and recording creative thinking and planning; by lecture, demonstration and practical work, both group and individual, using paper and electronic methods for:

- brainstorming and mind-mapping
- note-taking
- mood boards
- storyboards
- attribute listing
- SWOT.

Workshops on development of practical interactive media design skills with formal brief introductory lecture at commencement of sessions covering skill to be developed in session:

- planning techniques
- generating a specification document (treatment)
- conducting reflective practice.

Topics and suggested assignments and activities

Assignment 3 – My Interactive Media Design Work Portfolio.

Learners will create a portfolio of interactive media design skills materials (some of which may be prepared for other units) supported by explanatory notes and tutor observational annotation covering:

- analysis of a creative brief
- creative thinking
- planning
- a specification document for an interactive media product
- application of reflective practice
 - intended outcome
 - plan
 - diary or log
 - test
 - evaluation.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcomes 1 and 2 is likely to comprise presentations, written reports and examples from interactive media products.

Evidence for the achievement of learning outcome 3 is most likely to be in the form of annotated examples of learners' interactive media design practice backed up by tutor observations. This could either be from a project set for this unit or from evidence produced for other units being studied in the pathway.

Presentations must be recorded for the purposes of internal and external verification. If assessments are based on conversations recorded in writing (as witness or observation reports) care must be taken to ensure that at least 50 per cent of such assessments are subject to internal verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will give accurate and substantially complete descriptions of what an interactive media product is in general terms and how interactive media design principles are applied to enhance the product. They will discuss only the main concepts and will use some appropriate technical terms in their explanation. When describing an interactive media product, a learner might write, 'The interactive media product includes interactivity, good use of colour, easily readable black text on a white background and effective navigation.'

2.1: learners will give accurate and substantially complete descriptions of what legal and ethical constraints are in general terms and how they might apply to their work. They will discuss only the main concepts and must use some appropriate technical terms in their explanation. A learner might write, 'It is important to observe copyright when selecting assets to be used in an interactive media product.'

1.1 and 2.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

3.1: learners will have made a brief and superficial analysis of the original brief, but will have identified sufficient information for them to begin to develop some practical response. The outline within the brief may not have been developed further with the client. Learners will have evidenced some creative activity using some of the tools listed in the content. In terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. Learners will have evidenced only basic planning techniques but will demonstrate that these plans have been used to guide their productivity. Their specification or treatment document will be minimal and will show a basic level of competence only; language may be poor and thoughts not fully developed. Although the task will be completed, descriptions may not be fully complete. These learners will evidence some reflective technique but their work will tend to emphasise production process rather than the quality of their product. Only superficial comparison with existing products will have been made and only vague references made contrasting final product with their intentions. Statements about the quality of their work will be made without supporting comments to justify them. Learners will typically need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Interactive Media Design: What You Need to Know	Contribution to online media careers ezine – article on principles of interactive media design.	<ul style="list-style-type: none"> • All preparatory notes. • Report document as word processed or electronic presentation.
2.1	Assignment 2 – Legal and Ethical Constraints in the Interactive Media Industry	Contribution to online media careers ezine – article on legal and ethical considerations for work done in the interactive media industry.	<ul style="list-style-type: none"> • All preparatory notes. • Report document as word processed or electronic presentation.
3.1	Assignment 3 – My Interactive Media Design Work Portfolio	Creation of portfolio of applied design skills for job interviews.	<ul style="list-style-type: none"> • Personal interactive media design portfolio containing: <ul style="list-style-type: none"> • design briefs • all ideas notes, sketches and drafts • planning documents • formal specification document • reflective practice log.

Essential resources

For this unit centres will need appropriate hardware and software of industry standard. Learners should have access to relevant software manufacturers' manuals, textbooks, the internet, and a range of examples of current interactive media practice.

Indicative resource materials

Textbooks

General:

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Chapman N and Chapman J — *Digital Interactive Media* (John Wiley & Sons, 2004) 978-0470858905

Elsom-Cook M — *Principles of Interactive Media* (McGraw-Hill Higher Education, 2001) 978-0077096106

Galitz W O — *The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques, Third Edition* (John Wiley & Sons, 2007) 978-0470053423

Garrett J J — *The Elements of User Experience* (New Riders, 2002) 978-0735712027

Krug S — *Don't Make Me Think! A Common Sense Approach to Web Usability, Second Edition* (New Riders, 2005) 978-0321344755

Mandel T — *The Elements of User Interface Design, 2nd Edition* (John Wiley & Sons, 2007) 978-0471227304

On layout and interface design:

Vaughan T — *Multimedia: Making it Work, 6th Edition* (McGraw-Hill, 2003) 978-0072230000

On navigation:

Fleming J — *Web Navigation: Designing the User Experience* (O'Reilly Media, 1998) 978-1565923515

Holmes M and Lowe R — *Web Usability and Navigation: A Beginner's Guide* (Osborne McGraw-Hill, 2002) 978-0072192612

Studio 7.5 — *Navigation for the internet and Other Digital Media* (Ava Publishing, 2002) 978-2884790116

On human-computer interaction:

Dix A et al — *Human Computer Interaction* (Prentice Hall, 2003)
978-0130461094

Fincher S et al — *People and Computers: Design for Life* (Springer-Verlag UK, 2004) 978-1852339005

Sharp H et al — *Interaction Design: Beyond Human-Computer Interaction*, 2nd Edition (John Wiley & Sons, 2002) 978-0470018668

Shneiderman B — *Designing the User Interface: Strategies for Effective Human-Computer Interaction* (Pearson, 2009) 978-0321601483

Websites

<http://abduzeedo.com/> — graphic design inspiration

<http://designshack.co.uk/news/best-of-2008-graphic-design-tutorials> — a collection of articles and tutorials to inspire graphic designers

<http://library.albany.edu/imc/webdesign/> — basic web design tutorial

<http://websites tips.com/creativity/> — annotated links to articles and tutorials on creativity

www.adobe.com/designcenter/ — collections of articles on design

www.designtalkboard.com/ — graphic design, web design issues and forums

www.designtalkboard.com/glossary/ — glossaries for design, design software, fonts, web design, pre-press and print

www.entheosweb.com/website_design/default.asp — web design tutorials and more in: Flash; Dreamweaver; Fireworks; Photoshop

www.ideachampions.com/tips_tools_overview.shtml — creative thinking tools and techniques

www.mindtools.com — parent site for hints on project management & creativity

www.useit.com — web usability

www.webreference.com/dlab/9705/index.html — web navigation design

Unit 29: Motion Graphics and Compositing Video

Unit code: M/600/6647

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop learners' understanding of motion graphics and compositing video and to enable them to produce a range of visual effects on digital video. Learners will achieve this through a study of existing examples of motion graphics and through planning and producing a motion graphics sequence and reflecting on their work.

Unit introduction

Moving image productions frequently feature elements of graphic design for the screen. For example, television stations are frequently branded with an animated logo between shows, caption bars on documentaries and news features can animate on and off the screen, title sequences often mix still with animated and moving images, and DVD interfaces use combinations of animated graphics and typography with digital video sequences. It is also common to see visual effects applied to moving image sequences in a wide range of productions.

Motion graphics techniques are used to create these sequences. This unit gives learners the opportunity to develop skills in motion graphics by planning and producing a motion graphics project. These techniques take learners beyond shooting and editing video into more complex and sophisticated post-production techniques. Project planning is important and in motion graphics this covers generating ideas, making decisions about graphical content, and storyboarding the way this integrates with moving image. Work needs to be reviewed for quality throughout, so learners need to be able to assess the appropriateness of what they are producing to the given brief, and examine its technical and aesthetic standards. This unit asks learners to show evidence of how they have managed their project from the generation of ideas through to acquiring feedback on the finished work. This represents a mapping of the creative and project management processes involved.

The unit begins with investigations into motion graphics, enabling learners to understand the uses of graphics in moving image production. These investigations will cover both visual and technical research. Learners are encouraged to look closely at existing motion graphics sequences to analyse their design and effects. They also investigate technologies associated with motion graphics and moving image delivery.

Learners will apply motion graphics software techniques to create their visual material, which will be assessed for both its technical and aesthetic qualities. This encourages learners to produce material that answers its brief imaginatively and is technically suitable for its purpose, which is a good grounding for working professionally.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand current uses of motion graphics and compositing video	1.1	describe current uses of motion graphics and compositing video with some appropriate use of subject terminology
2	Be able to originate and plan a motion graphics sequence	2.1	originate and plan a motion graphics sequence working within appropriate conventions and with some assistance
3	Be able to produce a motion graphics sequence.	3.1	produce a motion graphics sequence working within appropriate conventions and with some assistance.

Unit content

1 Understand current uses of motion graphics and compositing video

Uses: eg DVD interfaces, title and credit sequences, animated captions, stings, idents, interactive menus, web banners

Characteristics: graphics; movement; visual effects

Technology issues: frame rate; video format; screen ratios; resolution; compression

2 Be able to originate and plan a motion graphics sequence

Specification: client needs; audience; audio settings; video settings; other settings

Develop ideas: brainstorming; storyboards; scripts; legal and ethical considerations

Proposal: content; purpose; target audience; medium of delivery

Planning: importance of planning; time management; deadlines

3 Be able to produce a motion graphics sequence

Software techniques: importing; composition; frame size; resolution; copy and cut key frames; key frame assistant; rasterising; motion paths; interpolation; drop shadows; effects; layers; adjustment layers; masks, mattes; RAM preview; rendering; filters; compression; exporting

Compositing video: layers; uses; blue screen and green screen techniques; compositing software; TV formats (PAL, NTSC); frame rate; resolution; colours; safe area

Workspace: project window; title bar; help; timeline; menus; effects window; custom settings (preferences, general, preview, display)

Production management: scheduling; meeting deadlines; management of resources; working to the client's brief; liaison with clients; client negotiation; quality management; teamworking; presentations

Reflective practice: finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities, content, style); production skills; ideas generation; planning; preparation; workflow and time management; technical competence; project management; monitoring work in progress; creative ability; own work; teamwork ; self-evaluation; comments from others, eg audience, peers, tutors, client; documentation, eg notes, sketches, storyboards, production logs

Delivery

This unit is intended to develop an understanding of the range of practical applications in motion graphics. Learners must be aware of the use of motion graphics in television and film as well as interactive media applications. Interesting examples of professional work should be viewed and discussions should focus on the purpose and form of the sequences. Learners should be encouraged to investigate the relevant technologies such as video file formats, resolution and compression.

An important foundation for any motion graphics project is ideas generation and planning, so time spent on this away from the computer will pay dividends. Learners must be encouraged to think about how ideas are generated and how to apply techniques such as brainstorming and mood boards. Motion graphics should be clearly devised before production, particularly through storyboards.

Lectures and discussions should be incorporated into the teaching programme as should demonstration classes from practitioners if at all possible, as people working in the media industries can bring a new perspective to learners' understanding of contemporary practice. Visits to media producers and trade exhibitions would provide valuable experience for learners.

This is a software skills and knowledge unit and is best delivered by demonstration, discussion and practical projects. Learners must have opportunities to use industry-standard software and to experiment with a wide range of ideas and techniques. They should produce an appropriate motion graphics sequence of an appropriate length.

Workshops and demonstrations are recommended when teaching software applications. Learners should then be encouraged to apply these software techniques to their own assignment work. It is useful to encourage learners to monitor and review their work during production, creating a quality control process which will enable them to improve technical and creative decisions. Projects can then culminate in the learners reflecting on their work, enabling them to evaluate their successes in both the production processes and the qualities of their finished products.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Lecture on uses and characteristics of motion graphics and compositing for video.
Comparison and demonstration of compositing programmes.
Lecture and research on technology considerations in motion graphics.
Lectures on TV formats and compression, frame size, frame rate, resolution.
Small group investigation of examples of motion graphics.
Assignment 1 – Analysis of Examples of Motion Graphics. Learners have been asked to give a presentation on motion graphics to a careers convention for 16 year olds. Learners will cover: <ul style="list-style-type: none">• different uses of motion graphics• characteristics of each example referred to• interesting technological issues evidenced in the examples.
Skill building using features of motion graphics and video compositing software including: <ul style="list-style-type: none">• introduction to software and workspace• basic compositing exercises using layers• key frames• blue screen/green screen techniques• effects, eg drop shadow, filters• previewing, rendering and exporting.
Introduction to and review of ideas generation and planning.

Topics and suggested assignments and activities

Assignment 2 – Creating a Motion Graphics Sequence.

Brief from sci-fi channel to create a motion graphics sequence for the intro sequence for a children's TV pilot.

Stage 1 – ideas generation.

Learners will:

- consider and interpret a creative brief
- generate and record ideas
- consider the legal and ethical implications of their proposed work
- storyboard and script sequence
- carry out planning activities prior to production
- maintain a development log evidencing their creative work.

Stage 2 – produce and review.

Learners will:

- create/collect materials for motion graphics sequence
- undertake production workshop sessions following their planned ideas
- maintain a development log evidencing their creative work
- obtain feedback on and review their own motion graphics sequence
- present motion graphics sequence.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcome 1 could be made up of a learner's investigations into, and experimentation with, motion graphics technologies. Notes from lectures, research from the internet, books and periodicals, written reports and case studies, and oral presentations can all contribute to the evidence. Presentations must be recorded for the purposes of internal and external verification.

Achievement of learning outcome 2 could be evidenced through notes on the creative process, including storyboards and sketches, and the planning process, including schedules and minutes of meetings.

Evidence for the achievement of learning outcome 3 should be generated in response to a brief. This brief can either be given to the learners or developed by them in negotiation with their tutor. In the latter case the 'client' should be carefully defined so that the learner is able to develop a clear idea of what the specific needs of that 'client' might be. Evidence could be made up of individual notes accompanied by digital documents showing

work in progress and the finished sequence, along with tutor observation of software use. Learners could test their work for content and concepts on clients, peers, and target audiences, and test for technical functionality. A reflective development log should cover both the successes of the production processes and the qualities of the finished images.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will be able to describe correctly, and with substantial but not necessarily complete coverage, the key characteristics of motion graphics and compositing video technology and usage. They will be able to accurately identify technical issues such as file formats and compression. A learner may note, 'Codecs compress and decompress information to reduce file size which can sometimes cause a reduction in the image quality.' They will also be able to identify the purpose of examples of motion graphics, distinguishing correctly between, for example, title sequences and programme stings. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will be able to originate and plan a motion graphics and compositing video project which uses some of the key characteristics of motion graphics and compositing video in simple and conventional ways. There will be limited evidence of the development process, such as basic visualisations.

3.1: learners will have achieved a finished sequence working with basic motion graphics and compositing video software techniques, but the outcomes will not be exactly as intended. The work on the production will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. When engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive

use of it, they should not be considered for a pass for this unit. Learners will be able to consider their own work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification, such as, 'I think my motion graphics sequence is very dynamic and would be interesting for young people.'

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Analysis of Examples of Motion Graphics	Learners have been asked to give a presentation on current uses of motion graphics to a careers convention for 16-year-olds.	<ul style="list-style-type: none"> All preparatory notes. Presentation slides, notes and handouts. Recording of presentation.
2.1	Assignment 2 – Creating a Motion Graphics Sequence Stage 1 – ideas generation	Brief from sci-fi channel to create a motion graphics sequence for the intro sequence for a children's TV pilot.	<ul style="list-style-type: none"> All ideas notes, sketches and storyboards. Summary of legal and ethical implications.
3.1	Assignment 2 – Creating a Motion Graphics Sequence Stage 2 – produce and review	As above.	<ul style="list-style-type: none"> final product saved to CD. All production documentation. Development log. Feedback and review.

Essential resources

Learners will need access to computer hardware with appropriate accessories such as scanners and printers, and to appropriate software such as Adobe After Effects, Adobe Premiere, Macromedia Flash and Adobe PhotoShop/Image Ready FTP. They may also need access to digital video cameras to film the footage to be used in the sequence, and internet access for research purposes.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe After Effects CS4: The Official Training Workbook* (Adobe, 2009) 978-0321573834

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371

Christiansen M — *Adobe After Effects CS4 Visual Effects and Compositing Studio Techniques* (Adobe Press, 2008) 978-0321592019

Meyer T — *Creating Motion Graphics with After Effects* (Focal Press, 2007) 978-0240810102

Spencer M — *Motion Graphics and Effects in Final Cut Studio 2* (Peachpit Press, 2007) 978-0321509406

Woolman M — *Motion Design: Design for Motion, Sequence and Visual Impact* (RotoVision, 2004) 978-2880467890

Websites

www.adobe.com — the website of this software manufacturer contains useful information and resources, including training materials, forums, downloadable trial software and players, news etc

www.apple.com — the 'developer' section of the Apple website offers training, news, reference and resources particularly relevant to users of Final Cut and Motion; the trailers section is a good resource for movie trailers

www.bbc.co.uk/bbcone/downloads/ — a collection of idents from BBC1

www.dv.com — DV magazine website specialises in digital video production news and information

www.meldrum.co.uk/mhp/identzone/ — a collection of idents over the years

www.visit4info.com/ — a good source for example trailers and adverts

Unit 30: Music Video Production

Unit code: M/600/6650

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

In this unit learners will explore the purpose, styles and conventions of music video. They will then develop, plan and produce a music video.

Unit introduction

There are many opportunities for the application of music video production techniques in the media industries including the established outlets of TV music channels, marketing and promotion within the popular music industry, direct DVD sales, websites of new and emerging artists, such as Myspace and YouTube; phone downloads and VJing in music venues, at concerts and at festivals.

Music videos provide the ideal opportunity for experimenting with visual moving imagery allowing learners to use their creative imagination to the maximum and to apply technical skills, which have been developed in other units.

The study of established styles and conventions of the music video is a starting point, as learners need to understand what has already been done in order to develop their own ideas. They can then experiment with techniques to create music videos, which might reflect their own musical interests or they might work for a band or artist to create a music video for a 'live' brief. They will also be able to enhance and further develop the transferable skills of video production, in particular the post-production techniques of editing and effects application with the potential for advanced techniques such as mixing digital or stop-frame animation with live footage, chroma key and matte effects.

Learners will develop the creative knowledge to entertain and engage the target audience, to potentially consider the requirements of a client and fulfil the promotional purpose of the product.

The development of creative concepts and the skills needed to apply them are readily transferable to many other genres including advertising, drama and computer game design.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand the purpose of music videos	1.1	describe the purposes of music videos with some appropriate use of subject terminology
2	Understand the styles, conventions, and techniques of music videos	2.1	describe the styles, conventions and techniques of music videos with some appropriate use of subject terminology
3	Be able to originate and plan a music video production for a specific music track	3.1	originate and plan a music video production for a specific music track working within appropriate conventions with some assistance
4	Be able to work to complete production of a music video.	4.1	work to complete production of a music video working within appropriate conventions and with some assistance.

Unit content

1 Understand the purpose of music videos

Purposes: promotional; extension of income; extension of outlets (music channel, direct DVD or CD sales, website, download); links to films or TV programmes (synergy); producers' strategies (major label, independent, artist self-produced)

2 Understand the styles, conventions, and techniques of music videos

Styles: popular music genres; in-concert and 'as live' footage; animation (stop motion, digital); interpretative; narrative; impressionist; surrealist; pastiche; parody; referencing; homage; influence of commercials

Conventions: lyric interpretation; extending or consolidating song's meaning; allusion; links to other artists

Techniques: cutting to beat; effects; miming and lip sync; playback and lip sync; multi-image; camera movements; camera angles; chroma key

3 Be able to originate and plan a music video production for a specific music track

Originate ideas: choosing music track; analysing music track (meaning, content, imagery, narrative, duration, pace, style, semiotics); performer's style; performer's image; video's style; creative concept

Research: sources for locations; found footage (video archives, libraries, websites, copyright, waivers)

Plan: script; storyboard; shooting script (camera movements, takes, angles, continuity); selection of technical and performance crew; team roles and responsibilities; production organisation and schedule; location recce; risk assessments; permissions to film; clearances

4 Be able to work to complete production of a music video

Work: eg individually, as director, as production manager, as camera operator, as gaffer, as editor

Production: eg direct action, manage production, shoot footage, create animation, light, create SFX, edit; production log

Delivery

The study and production of music videos can expand learners' visual literacy, encourage experimentation and develop advanced post-production techniques in a genre in which learners have the opportunity to pursue their personal musical interests and hence be, perhaps, more than usually motivated.

Screenings of a wide range of professional music videos can be employed to initiate discussion and analysis of the styles and conventions of the genre. One method of encouraging learners to study a music video beyond the simple reason of its starring their favourite artist or band can be to require learners to nominate and present their own favourite productions to the rest of their group and defend their choice in discussion, justifying its visual effectiveness, its ability to enhance or market the music track and why it employs a particular style.

Screenings of experimental films and animations, TV advertisements and art films can help promote understanding of the potential cross-overs and links between the genres and widen the range of potential ideas for learners' own work. Exercises and seminars in production and post-production effects techniques will enable learners to understand how those examples were achieved and consider them for their own productions.

Learners need to think about the purpose of their productions and so discussions or seminars on the varied applications for marketing products, promoting artists, developing an audience and the structure of the popular music industry are needed.

Found footage is fully acceptable for inclusion with learners' own footage as long as it is substantially modified by edit or effects techniques. Consideration should be given to copyright and obtaining clearances, but provided no actual public airing or sale is planned, clearance can be limited to that required by educational establishments for use of footage. Where actual public screening, sale or webcast is planned full clearances, including clearance for the use of the music track, will be essential.

It can be exceptionally engaging for the learner to produce music videos for a 'real' client, for example a local band or artist. The final product then might have a genuine outlet on YouTube or MySpace. This process can be useful, especially if the learner is gaining feedback from the client and amending and moulding the product accordingly.

Reviews of rushes and rough edits can be effective ways of monitoring production progress and provide opportunities for introducing and developing edit and effects techniques.

Arranging production screenings, ideally to the target audience but at least to the group and possibly to performers and music artist featured, can serve the dual function of gaining feedback on the production's effectiveness and, if a prearranged date is made, can motivate learners to work to a fixed deadline, mirroring professional practice.

NB: This unit has been designed so that learners will individually produce an idea and pre-production documentation for a music video (learning outcome 3), but will then be able to work either in groups or on their own for the production phase (learning outcome 4). It is also possible for those working in a group to produce footage as a group and then do individual edits of the final video.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Class discussion on the purpose of music videos with illustrations. Learners work through examples in pairs taking notes.
Assignment 1 – Why Videos? Learners do individual illustrated presentations on the purposes of music videos: <ul style="list-style-type: none"> • preparation • presentations.
Class discussion on styles, conventions and techniques of music videos with illustrations. (Two sessions.)
Assignment 2 – Video Video! Learners write and record a spoken sound track over a selection of visual examples of music videos commenting on the styles, conventions and techniques of examples selected.

Topics and suggested assignments and activities

Assignment 3 – Ideas Factory.

Learners are given a number of tracks and are required to individually originate ideas for and plan a music video for one of them:

Learners:

- originate ideas
- select an idea
- research locations, props, found footage, copyright clearances as appropriate
- script and storyboard the idea
- create schedules, location recces, risk assessments, permissions, clearances.

Learners then pitch their ideas to each other:

- prepare pitch
- present pitch.

A selection of ideas is chosen to go into production and learners elect to join production teams of 3, assigning roles as follows:

- director
- camera/lighting
- production manager.

Assignment 4 – Production.

Assignment 5 – Post-production.

Footage is logged by the group and learners then individually edit their own version of the video.

Learners present their finished music videos to one another. (Two sessions.)

Unit learning and assessment review.

Assessment

Evidence for assessment

The focus of assessment for this unit is on the development of skills and techniques and the application of the knowledge gained of professional music video production and its applications.

Evidence for the achievement of learning outcomes 1 and 2 could be case studies in the form of written reports, or presentations using learners' multimedia or video skills. This work may also be presented in an audio format or video with an audio commentary/analysis.

Evidence for the achievement of learning outcome 3 may be generated by the planning and production documentation submitted as part of a production file. The evidence for this outcome must be individual throughout. Each learner will develop ideas for a specific music track, research those ideas and generate relevant planning documentation for the pre-production phase of this idea.

Evidence for the achievement of learning outcome 4 will principally be generated by the finished video and associated documentation, supported by tutor observation or recording of the production process.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1 and 2.1: learners will outline some of the main purposes, styles and conventions of music videos. All aspects of the descriptions will be accurate and relevant, and the topics addressed will be covered substantially though not absolutely completely. A learner might note, 'One of the purposes of music videos is to increase the profits from a track, as if someone sees the video and likes it they will buy that as well as the original track. One of the commonest styles is the 'in-concert' style where the band is filmed performing the song at a gig. This style uses a lot of fast camera movements and odd angles.' A simple list of purposes, styles and conventions is not sufficient evidence for achievement of these criteria.

Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

3.1: learners will provide planning and production documentation though not necessarily in full detail. There will be some evidence of originated ideas, research and planning documentation.

4.1: learners will have completed a music video, but it will not have fully realised their intentions. However, their production activity will have been purposeful and will have involved the deliberate application of appropriate techniques. When working in a group, learners will have contributed a limited amount whilst fulfilling their production role. Their contribution to the editing phase will be limited in its response.

3.1 and 4.1: in terms of the aesthetic or creative qualities of their ideas, learners will not move beyond the conventional. Their production plans may, in effect, be modified versions of existing productions. They will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Why Videos?	Learners are working for a video production company; they have to prepare a short talk designed to persuade aspiring bands to employ the company to make their first video.	<ul style="list-style-type: none"> • All class notes. • Presentation slides, handouts and notes. • Recording of presentation.

Criteria covered	Assignment title	Scenario	Assessment method
2.1	Assignment 2 – Video Video!	Learners have been asked to produce a ten minute section of a TV programme on music video production illustrating the styles, conventions and techniques of music videos.	<ul style="list-style-type: none"> • All preparatory and research notes. • Finished video with commentary.
3.1	Assignment 3 – Ideas Factory	Learners are working for a video production company; they are required to originate ideas, research and plan music videos for a number of tracks which will be pitched to the bands' marketing people to try to get the production contracts.	<p>Portfolio containing:</p> <ul style="list-style-type: none"> • analysis of music track • consideration of performers style/image • creative concept • ideas development • research for locations, found footage and other relevant material • scripts, storyboards, shooting scripts • location recces, risk assessments, permissions and clearances • production schedule • pitch notes • pitch (recorded).

Criteria covered	Assignment title	Scenario	Assessment method
4.1	Assignment 4 - Production and Assignment 5 - Post-production	As above.	<ul style="list-style-type: none"> • All production documentation, including individual production logs. • Rushes and reviews of rushes. • Tape logs. • Edit decision lists. • Edit notes. • Finished music video.

Essential resources

Learners will need access to a wide range of music video productions, covering different styles, approaches and techniques. The internet is a readily accessible resource for both current and classic music videos. Learners' own collections can also provide variety. Examples of experimental art films and animation, websites featuring the work of dance club and concert videojocks are useful to widen learners' potential ideas for techniques.

Productions will be enhanced if stop-frame or digital animation facilities, effects software, chroma key/matte facilities are available.

For this unit learners should have access to appropriate production equipment. They will need to have access to digital cameras to record moving image, camera support systems, computers with digital editing software and appropriate storage devices.

Indicative resource materials

Textbooks

Austerlitz S — *Money for Nothing: A History of the Music Video from the 'Beatles' to the 'White Stripes'* (Continuum, 2008) 978-0820418180

Ayeroff J, Reiss S, Feineman N, Stipe M — *Thirty Frames Per Second: The Visionary Art of the Music Video* (Harry N. Abrahams INC, 2000) 0810943573

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371

Chater K — *Research for Media Production, 2nd Edition* (Focal Press, 2001) 978-0240516486

- Cleve B – *Film Production Management* (Focal Press, 2000)
978-0240806952
- Evans R — *Practical DV Film Making* (Focal Press, 2004) 978-0240516578
- Flint M — *A User's Guide to Copyright* (Tottel Publishing, 2006)
978-1845920685
- Forests G — *Produce and Promote Your Music Video* (Hal Leonard Corporation, 2008) 978-1423427278
- Hanson M — *Reinventing Music Video: Next-generation Directors, their Inspiration and Work* (Rotovision, 2007) 978-0240808345
- Hardy P — *Filming on a Microbudget* (Pocket Essentials, 2008)
978-1842433010
- Kindem G and Musberger G — *Introduction to Media Production* (Focal Press, 2009) 978-0240810829
- Laybourne K — *The Animation Book: A Complete Guide to Animated Filmmaking* (Three Rivers Press, 1998) 978-0517886021
- Lord P, Park N, and Sibley B — *Creating 3-D Animation: The Aardman Book of Filmmaking* (HNA Books, 2004) 978-0810949713
- Millerson G and Owens J — *Video Production Handbook* (Focal Press, 2008)
978-0240520803
- Musberger R — *Single Video Camera Production* (Focal Press, 2005)
978-0240807065
- Roberts-Breslin J — *Making Media: Foundations of Sound and Image Production* (Focal Press, 2007) 978-0240809076
- Schwartz L — *Making Music Videos: Everything You Need to Know from the Best in the Business* (Watson Gupstill, 2007) 978-0823083688
- Small R — *Production Safety for Film, Television and Video* (Focal Press, 2000) 978-0240515311
- Thompson R — *Grammar of the Edit* (Focal Press, 1993) 978-0240513409
- Vineyard J — *Setting up Your Shots* (Michael Wiese Productions, 2008)
978-1932907421

Websites

www.mtv.com

Unit 31: Object-oriented Design for Computer Games

Unit code: R/600/6656

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to enable learners to understand the main concepts and principles of object-oriented design and modelling techniques, and to apply those techniques to game design. They will examine OOD structural and operational elements with modelling, and investigate elements of existing games.

Unit introduction

Game design is a complex process involving many individuals with a wide range of skills. Individual team members will have specialist skills (creative design, programming, management etc) but will still need to communicate effectively to plan and implement game designs. An object-oriented approach to design provides a method of breaking down the complex process of game design into many smaller elements (or objects). Standard modelling techniques such as unified modelling language (UML), which use diagrams and keywords to represent game elements, simplify understanding and make the design process more efficient by allowing game elements to be reused. The modelling techniques provide an interface between creative designers (who can express their requirements without having to know the detail of the code) and programmers (who can use the models to implement the code).

Object-oriented design is one part of the overall design process and should be seen in this context. Normally object-oriented design would start after completion of the creative phase (development of concepts and ideas) and would be used to flesh out ideas. The object approach can then be used to plan the detailed implementation of a project to ensure that milestones and other parameters are met.

In this unit learners will develop their understanding of the main concepts and principles of object-oriented design and how modelling techniques can be adapted for game design. They will develop an understanding of structural and operational elements with modelling, and the approaches involved, by investigating elements of an existing game. Learners will design a complex game element using object-oriented modelling techniques.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the purpose of object-oriented design for games	1.1 describe the purpose of object-oriented design for games with some appropriate use of subject terminology
2 Understand object-oriented design elements	2.1 describe object-oriented design elements with some appropriate use of subject terminology
3 Understand object-oriented modelling	3.1 review object-oriented modelling with some appropriate use of subject terminology
4 Be able to use object-oriented modelling techniques to design a game element.	4.1 apply object-oriented modelling techniques to design a game element with some assistance.

Unit content

1 Understand the purpose of object-oriented design for games

Concepts and principles: simplified understanding; reusability; maintenance; efficiency; real-world modelling; collaboration and sharing; communication; quality assurance

Game objects: sprites; characters; weapons; rooms; walls; scenery; instances; rewards, eg bonuses, power-ups

Object properties: colour; size; speed; movement; sounds; health; lives

Actions and events: mouse and keyboard events; create; destroy; collision; timers; scoring

Inheritance: parent; child; inherited behaviours and properties; overriding events

2 Understand object-oriented design elements

Structures: classes; objects; instances; components

Properties: class properties; instance properties Inheritance: class inheritance; instance inheritance

Methods: method header; method body; encapsulation; attribute visibility

Polymorphism: overloading; overriding

Messaging: communication between objects; message header; message body

3 Understand object-oriented modelling

Unified modelling language concepts: structure (attribute, class); behaviour (activity, event, method); relationship (aggregation, annotation, composition, depends, generalisation/inheritance)

Unified modelling language symbols and notation: classes; relationships; constraints; generalisation

Unified modelling language diagram types: structure (class, object); behaviour (statechart); interaction (collaboration, interaction, timing)

Modelling: object model (class diagrams); dynamic model (sequence diagrams, statecharts)

4 Be able to use object-oriented modelling techniques to design a game element

Game element: object, eg sprite, character, vehicle, weapon, rooms, walls, scenery

Object attributes: properties (colour, visibility, transparency, size, speed, movement); behaviours (mouse events, collision events, keyboard events)

Diagram structural relationships: objects; instances; inheritance; communication; messaging

Diagram event progress: objects; properties; events; behaviours; variables; messages; decisions; loops

Game element specification: documentation, eg unified modelling language (UML), dynamic model, diagrams (structural relationships, event progress)

Delivery

This unit is intended to provide the learner with knowledge and understanding of object-oriented modelling techniques and of how they can be applied to game design, along with the ability to apply them. The emphasis of the unit should be on how object-oriented techniques can be used as a communication tool between creative designers and programmers and how this can lead to a more efficient design process.

To help learners understand the concept of objects it would be useful to analyse an existing game, identifying different types of simple objects (eg characters, weapons and scenery) and listing common properties/behaviours for each (eg number of limbs, colour, hair, fur, move, etc). To introduce the concept of inheritance, each object could be represented by a simple diagram with a hierarchical structure. It is important to emphasise the use of this simple diagram as a communication tool between the creative designers and the game programmers who will write code to implement each of the objects.

The next stage of teaching could be to use a simple game creation application (eg Game Maker) to show how game elements are constructed from objects which are reused many times as different instances within a game. Other concepts can also be introduced at this stage, such as methods (through the use of actions and events), messaging (interaction between objects in a game) and inheritance (the same game object being reused with different behaviours). The main concepts and terminology of object-oriented design can be introduced gradually through the use of actual game objects which will help to reinforce understanding. Object-oriented tools such as UML, state transition or event progress diagrams can also be introduced at this stage to model each of the objects, their behaviours and interaction with each other.

Learners will be required to design a complex game element using the object-oriented modelling techniques developed; this could be an element of a game being designed for one of the other units. It should be noted that some of the standard modelling techniques used for programming may need to be modified slightly to model games accurately depending on the application used.

Learners should be encouraged to apply object-oriented design during the development of solutions in other relevant units. At least one programming or scripting language should be used to demonstrate how objects are actually implemented in code. This should be code/script which learners are using or will be expected to use as their knowledge and skills develop.

The unit could be taught with a variety of activities within the teaching sessions. There will be a need for lectures, discussion and demonstrations as well as practical sessions. Learners will need to experience gameplay and all its ramifications. Research will include the internet as well as taking part in the playing of a variety of games on a range of platforms. Although this game playing is an essential aspect of research in this unit, it must not outweigh the other methods of learning. When playing games the learner must understand the specific reason for such play. In this case they will be looking at games with the intention of 'decomposing' or 'reverse engineering' them into their structural and operational components.

Outside visits and visits from guest speakers could be arranged to support classroom teaching.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to object-oriented design and its use for game programming. Learners: <ul style="list-style-type: none"> • receive lectures explaining concepts and principles • receive lectures explaining games objects and their OOD attributes • receive lectures explaining the concepts of actions, events and inheritance • conduct private research into OOD used in game programming.
Assignment 1 – Object-oriented Design: What You Need to Know. Learners will write an article on use of object-oriented design in game development for an online gaming ezine. The article must cover: <ul style="list-style-type: none"> • concepts and principles • game objects • object properties • actions and events • inheritance.

- receive lectures explaining concepts and principles
- receive lectures explaining games objects and their OOD attributes
- receive lectures explaining the concepts of actions, events and inheritance
- conduct private research into OOD used in game programming.

Assignment 1 – Object-oriented Design: What You Need to Know.

Learners will write an article on use of object-oriented design in game development for an online gaming ezine.

The article must cover:

- concepts and principles
- game objects
- object properties
- actions and events
- inheritance.

Topics and suggested assignments and activities

Introduction to elements of object-oriented design.

Learners:

- receive lectures explaining OOD structures, properties and methods using examples drawn from computer game code scripts
- receive lectures explaining OOD concepts of polymorphism and messaging, using examples taken from computer game code scripts
- conduct private research into game script examples (eg using ActionScript 3) to identify OOD concepts and structures.

Introduction to object-oriented design modelling.

Learners:

- receive lectures explaining unified modelling language (UML) concepts, structures, symbols and diagram types
- undertake tutor-led workshops to develop OOD modelling skills, constructing class diagrams, sequence diagrams and statecharts
- practise construction of OOD modelling diagrams and associated documentation.

Assignment 2 – Object-oriented Design: Elements and Modelling.

Learners will write a technical article on object-oriented design elements and modelling for online computer games ezine, discussing in depth OOD elements and UML modelling techniques.

The article must cover:

- structures
- properties
- methods
- polymorphism
- messaging.

Assignment 3 – My object-oriented Design Character.

As part of the creation of their job-application portfolio of applied object-oriented design skills, learners will design and create an OOD character for a proposed game.

Learners will:

- construct appropriate structural relationship diagrams using UML notation
- construct appropriate event diagrams using UML notation
- author the 'semantic backplane' — documentation such as written use cases that drive the model elements and diagrams
- present their OOD design work as a specification for their character.

Topics and suggested assignments and activities

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcomes 1, 2 and 3 is likely to comprise a combination of observation, presentations, diagrams, charts, ongoing critique, research evidence, logbook or diary evidence and solutions to problems. Presentations must be recorded for the purposes of internal and external verification.

Evidence for the achievement of learning outcome 4 could be a portfolio of evidence containing, for example, structural relationship diagrams using UML notation, event diagrams using UML notation, documentation such as written use cases to support model elements and diagrams, and their OOD design work presented as a specification for the element.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will give accurate and substantially complete descriptions of what objects are in general terms (for example, a reusable element of a game such as a car) and how object-oriented design is used to enhance the design process within the games industry. They will discuss only the main concepts and advantages and must use some appropriate technical terms in their explanation (for example, efficiency, ease of maintenance). When explaining the purpose of object-oriented design, a learner might write, 'The purpose of object-oriented design within games is to allow for efficient and easy extension or upgrades to a game.'

2.1: learners will correctly describe the full range of elements as identified in the unit content, giving a substantially complete description of each element. The evidence must describe structures, properties, inheritance, methods, polymorphism and messaging. Some clear understanding of

appropriate terminology should be evident but the learner may not illustrate their response using an appropriate example. When describing 'structures', a learner might write, 'Object-oriented design uses classes and objects. A class describes something. An object is one actual occurrence of a class. This occurrence is called an 'instance' of the class.'

3.1: learners will provide a substantially full overview of object-oriented modelling describing structure, symbols and how they are used. A learner might describe the terminology used within a unified modelling language (UML) environment by the use of diagrams. Explanations should include some use of appropriate terminology.

1.1, 2.1 and 3.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

4.1: through the application of object-oriented modelling techniques learners will produce a simple game element in UML such as a character. The design will be basic and conventional with limited behaviours but should include examples of object attributes and structural relationships. Evidence might include diagrams, charts, notes and logs. The character should have clearly identifiable attributes and have methods describing how it may interact with other characters. Learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Object-oriented Design: What You Need to Know	Article on use of object-oriented design in game development for online gaming ezine.	<ul style="list-style-type: none"> All preparatory notes. Article as electronic or word processed document.
2.1 3.1	Assignment 2 – Object-oriented Design: Elements and Modelling	Technical article on object-oriented design elements and modelling for online computer games ezine.	<ul style="list-style-type: none"> All preparatory notes. Article as electronic or word processed document.

Criteria covered	Assignment title	Scenario	Assessment method
4.1	Assignment 3 – My Object-oriented Design Character	Creation of job-application portfolio of applied object-oriented design skills.	Portfolio containing: <ul style="list-style-type: none"> • structural relationship diagrams using UML notation • event diagrams using UML notation • documentation such as written use cases to support model elements and diagrams • their OOD design work presented as a specification for their character.

Essential resources

For this unit learners will need access to current research on object-oriented modelling with particular reference to games. Access to the internet and CD ROMs is essential. Learners should have access to a variety of media forms, with viewing, listening and reading facilities as appropriate.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Gold J — *Object-Oriented Game Development* (Addison-Wesley, 2004) 978-0321176608

Makar J — *Macromedia Flash MX Game Design Demystified* (Macromedia, 2002) 978- 0735713987

Miles R and Hamilton K — *Learning UML 2.0* (O'Reilly Media Inc, 2006) 978-0596009823

Overmars M — 'Learning Object-Oriented Design by Creating Games' in *Potentials (the journal of the Institute of Electrical and Electronic Engineers)*, December 2004– January 2005, Volume 23, Issue 5, pages 11-13. Available from www.cs.uu.nl/research/techreps/repo/CS-2004/2004-057.pdf

Rollings A and Morris D — *Game Architecture and Design: NRG Programming* (New Riders, 2003) 978- 0735713634

Swamy N and Swamy N — *Basic Game Design and Creation for Fun and Learning* (Charles River Media, 2006) 978-1584504467

Websites

www.cs.uu.nl/research/techreps/repo/CS-2004/2004-057.pdf — pdf article on learning object-oriented design by creating games, by M Overmars, author of Game Maker software (available from www.yoyogames.com/make)

www.developer.com/design/ — software development resources and articles

www.devmaster.net/articles/oo-game-design/ — game development encyclopaedia

www.gamasutra.com — respected website for all things game development, sister publication to the respected print magazine *Game Developer*; excellent game developer resources

www.macromedia.com/devnet/mx/director/articles/oo_dir_flash.html — article on designing and implementing objects

www.tdan.com/special003.htm — special feature on event progress diagrams

Unit 32: Photography and Photographic Practice

Unit code: H/600/6659

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop learners' knowledge of, and practical skills in, photography. Learners will investigate different areas of photography, such as promotional, advertising and photojournalism, and produce and reflect on their own practical examples of photographic work.

Unit introduction

Photography or photo-imaging is a major sector of the media industry in its own right with a wide variety of applications, from the production of personal records such as wedding photographs or family portraits to technical applications such as industrial or medical photography. Many other media sectors such as the press, television, film and interactive media, use — and often rely on — photo images to support their products. Professional photographers can also operate independently, producing photographic commissions to a brief or exhibition work that derives from their own interests.

Digital technology is rapidly changing the way in which images are produced. The use of digital imaging is becoming increasingly prevalent within the industry as the technology improves and many professional photographers will now shoot exclusively in a digital format, as demanded by the people and organisations that they supply. However, there is still a place for traditional methods of photography since prints and slides can easily be scanned and converted to a digital platform.

The unit will enable learners to experiment with a range of technology and techniques and should allow for both digital and film-based production. Learners will be able to explore the capabilities of digital image production and how digital cameras and processes can be controlled and manipulated to produce the desired effect. The unit will also allow learners to develop their analytical skills and visual literacy, and gain a contextual and cultural awareness of photography.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand different applications of photography	1.1 describe different applications of photography with some appropriate use of subject terminology
2 Know how to use photographic equipment and employ photographic techniques	2.1 use photographic equipment and employ photographic techniques with some assistance
3 Be able to plan and produce photographic images for a specified purpose	3.1 produce photographic images for a specified purpose with relevant planning material, working within appropriate conventions and with some assistance
4 Be able to reflect upon photographic work.	4.1 comment on own photographic work with some appropriate use of subject terminology.

Unit content

1 Understand different applications of photography

Photographic applications: advertising; promotional; fashion; photojournalism; portraiture; high-street studio work; architectural; medical; illustration; fine art; documentary

Contexts: magazines; newspapers; hoardings; books; web pages; CD ROMs; for individual clients; galleries

2 Know how to use photographic equipment and employ photographic techniques

Photographic equipment: film-based camera; digital camera; tripod; lenses (wide-angle, long, telephoto, macro, attachments); film types and storage devices (colour, black and white, transparency, instant, memory cards, flash cards); artificial lights (flash, studio lights, diffusers); processing (tanks, spools, measuring cylinders, thermometers); printing (enlargers, frames, contact printers, dishes, tongs); digital imaging (computer, software, scanner, image capture, image storage, image retrieval, printer)

Techniques: camera (aperture, shutter speed, focus, lens length; filters, film stock, film speed); processing (time control, temperature control, push processing, negative storage); printing (contact sheets, paper choice, test strips, exposure time, aperture, cropping, head height, dodging, burning, masking, special effects, dyeing, immersion time, bath temperatures, chemical exhaustion); digital manipulation, eg colour, shape, texture, cropping; software package facilities, eg palettes, cropping tools, stamps, lassos, layering; digital printing (printer functions, paper choice)

Health and safety: in darkroom; using lights; location risk assessments; legislation, eg Health and Safety at Work Act (1974), Control of Substances Hazardous to Health (COSHH) Regulations (2002), Provision and Use of Work Equipment Regulations (1998), Health and Safety (Display Screen Equipment) Regulations 1992

3 Be able to plan and produce photographic images for a specified purpose

Planning: creative thinking, eg mind-mapping, brainstorming, group discussion; research, eg past and current professional practice; response to the brief, feedback collection; ideas presentation; recording ideas, eg notes, sketches, collages, trial shots, influences; shooting schedule, eg studio booking, equipment booking, locations, risk assessment, health and safety, models, props

Purpose: eg advertising, promotional, photojournalism, portraiture, web pages, illustration, fine art, documentary

Presentation: portfolio (material, electronic); exhibition; projection

4 Be able to reflect upon photographic work

Visual language: composition (juxtaposition, association, angle of view); image construction, eg form, texture, shape, pattern, line, tone, colour, symbols, metaphor, semiotics, connotation, representation

Audiences: range of consideration, eg social, gender, peer groups, occupational, political

Historical and cultural context: range of references, eg social, race, religion, political, economical, art and design references, popular culture

Finished products: realisation of intentions; fitness for purpose; responding to feedback; technical qualities; aesthetic qualities; skills and knowledge gained

Production processes: technical competencies; creative ability; time management

Sources of information: self-evaluation; documentation, eg ideas notes, production logs, sketches, trial shots, notes on professional photographers and photography; comments from others (audiences, peers, tutors, client)

Delivery

It is important that learners understand technological developments in photography, the impact of these developments on photography as an art form and how they have affected the working practices of the professional photographer. Learners should therefore study the work of professional photographers through a range of historical and contemporary material such as advertising, promotional, photojournalism, web pages, CD ROMs, planning material, illustration, fine art, and documentary.

Preparatory investigations and analysis should develop the confidence of the learners in preparation for the production of their own photographic material. Initial group discussions could centre on images that the learners themselves have brought into the session and include such concepts as: fitness for purpose, audience consideration, textual and contextual explorations and associated technologies. Understanding could be evaluated through further group discussions, presentations or case studies on the work of professional photographers.

Short practical exercises should then be set, which would enable learners to experiment with material and processes to produce results which could be evaluated further by the learner, their peers and tutors. It should be stressed that automatic camera functions should be switched off to enable greater understanding and creative control. These initial exercises should allow experimentation with depth of field through aperture and shutter manipulation and exposure effects within a range of lighting conditions, both indoors and out. Film processing and printing would allow further stages of control and manipulation whilst digital applications will need to include image-editing, importing, scanning, cropping, the use of modes, layers and filters, printing and managing files.

Tutors should note that whilst it is desirable that learners have the opportunity to work with film-based technology it is acceptable for them simply to know about the process and its advantages and disadvantages as compared with digital photography. It is also perfectly acceptable for learners to produce all finished work for this unit using digital technology.

Learners should be asked to keep a notebook or folder of annotated images to provide further evidence of understanding and creative control. Tasks to create awareness of compositional elements, aesthetics and contextual issues such as representation and semiotics should be introduced alongside technical tasks, offering clear aims for the production of specific images. Tasks should encourage the learner to move towards technical and creative independence and to approach photography as a means of visual expression and communication.

Centres may wish to consider working with partners from industry to set real photographic briefs. If this cannot be done, simulated project briefs can be set which would offer an opportunity to learn about industry conventions, such as meeting with the client, presentation of ideas and initial work, meeting the needs of the brief in terms of fitness for purpose, consideration of target audiences, deadlines, constraints and regulations.

NB: Health and safety should be paramount when working on this unit. Studio and darkroom work presents particular hazards and lighting can be very dangerous if not handled with care and attention. Any work done outside the centre should be fully risk-assessed before learners are allowed to work offsite.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
<p>Guest speaker – freelance photographer specialising in an area of photography.</p> <p>Discussion with speaker covering general applications of photography, training for the job and career paths.</p>
<p>Field trips:</p> <ul style="list-style-type: none"> • exhibition at local gallery • museum of photography • studio of local photographer.
<p>Assignment 1 – Uses of Photography.</p> <p>Learners receive a brief to produce either:</p> <ol style="list-style-type: none"> 1 an illustrated chapter for a children’s book on photography introducing readers to its uses in the world around them, or 2 page for a photography website on the same topic. <p>Learners will:</p> <ul style="list-style-type: none"> • collate notes from guest visit and trips • draft chapter • research and obtain illustrations • write chapter and lay out with illustrations.

Topics and suggested assignments and activities

Workshops:

- camera techniques
 - depth of field
 - camera controls
 - flash and studio lighting
 - composition
- digital
 - hardware
 - software
 - image editing
- traditional
 - film speeds
 - exposure
 - developing negatives
 - paper
 - darkroom procedures
 - printing techniques.

Learner-initiated study – experiments following workshops.

Assignment 2 – People and Places.

As a freelance documentary photographer the learner has been commissioned to record a specific place during a specific period.

Learners will:

- research past and present examples of similar work
- brainstorm initial ideas
- consider potential, constraints, contexts
- develop ideas through sketchbook work, mood boards etc
- have discussions with tutor
- produce final photographs
- mount and exhibit.

Topics and suggested assignments and activities

Assignment 3 – Evaluation.

Learners write a review of their own exhibition for a photographic magazine (using the third person pronoun).

Learners will:

- consider their own objectives and intentions
- consider past and current practice that influenced their work
- interview peers, tutors and visitors to the exhibition to gather responses
- write review.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcome 1 could be provided in the form of a research file or written report that shows understanding of a variety of different applications in photography (documentary, fine art, advertising, photojournalism etc) and how imagery is used to communicate. Evidence might also be presented as a case study presentation or as audio or audio-visual recordings or presentations. Oral presentations must be recorded for the purposes of internal and external verification.

Evidence for the achievement of learning outcomes 2 and 3 will most likely be through an annotated portfolio of finished and presented work, produced either to a given brief or for a purpose defined by the learner. The format for presentation of the finished work could alternatively be an exhibition or an installation. Learners will also need to make available all associated supporting work that shows the different stages of the project. This can be presented in formats such as sketchbooks, notebooks, developmental images, screen grabs, annotated printouts and test prints. Where appropriate, evidence can be supported by tutor observation and witness statements.

NB: the work for evidencing achievement of learning outcomes 2 and 3 may be produced solely in either film-based or digital form.

Evidence for the achievement of learning outcome 4 might be in the form of a written evaluation, a presentation or as an audio or audio-visual recording or presentation, supported by sketchbooks, notebooks, developmental images, screen grabs, annotated printouts and test prints.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that

questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will give accurate and substantially complete descriptions of photographic applications and the associated techniques in relation to past and contemporary photographic practice. For example, they might describe some of the main applications of photography, such as advertising, promotional, fashion, photojournalism, sport and portraiture, and describe the main contexts in which these forms can be found, such as magazines, newspapers, hoardings, books, web pages, CD ROMs and galleries, including some reference to the main techniques used.

2.1: learners will use appropriate photographic equipment, employing appropriate photographic techniques. Learners will show a basic understanding of how to use both SLR film-based and digital cameras and will be able to describe, with some accuracy, the equipment and the techniques employed in both, though the use of technical vocabulary might be limited. Learners will be able to use the main camera functions such as aperture setting, shutter speed, focal length and the main darkroom processes of developing, printing and fixing, together with the procedures for transferring and manipulating digital images.

3.1: learners will plan for the production of a set of photo images for the purpose specified, though this planning will be basic and documentation brief. The images achieved will be technically acceptable though they will not fully realise what was intended in terms of realising the purpose specified. In terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the application within which they are working.

2.1 and 3.1: learners will typically need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

4.1: learners will consider their own work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification.

1.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Uses of Photography	Learner has been commissioned to produce either an illustrated chapter for a children’s book on photography introducing readers to its uses in the world around them, or a page for a photography website on the same topic.	<ul style="list-style-type: none"> • All notes taken from visiting speaker and during visits. • Illustration research notes. • Final chapter or screen grabs.
2.1 3.1	Assignment 2 – People and Places	As a freelance documentary photographer the learner has been commissioned to record a specific place during a specific period.	<ul style="list-style-type: none"> • All initial ideas, notes and sketches. • Research into examples of others’ work. • Development of ideas. • Final work mounted for exhibition.
4.1	Assignment 3 – Evaluation	Learners write a review of their own exhibition for a photographic magazine.	<ul style="list-style-type: none"> • Personal reflection notes. • Interview notes. • Finished review.

Essential resources

Learners will need access to digital camera equipment, software for image manipulation, computers and colour printers and ideally also to darkroom facilities.

Indicative resource materials

Textbooks

- Allen E and Triantaphillidou S — *The Manual of Photography and Digital Imaging* (Focal Press, 2009) ISBN 978-0240520377
- Anchell S — *The Darkroom Cookbook* (Focal Press, 2008) 978-0240810553
- Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725
- Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371
- Berger J — *Ways of Seeing* (Penguin, 1990) 978-0140135152
- Busselle M — *Creative Digital Photography*, 4th Edition (David & Charles, 2006) 978-0715322413
- Child J and Garner M — *Photographic Lighting Essential Skills (Photography Essential Skills)* (Focal Press, 2008) 978-0240520957
- Crowley D — *Magazine Covers*, 2nd Edition (Mitchell Beazley, 2005) 978-1845332396
- Daly T — *The Digital Photography Handbook* (Amphoto Books, 2004) 978-0817437930
- Davies A — *Focal Digital Imaging A to Z* (Focal Press, 2005) 978-0240519807
- Evening M and Schewe J — *Adobe CS4 for Photographers: The Ultimate Workshop* (Focal Press, 2009) 978-0240811185
- Farace J — *Getting Started with Digital Imaging: Tips, tools and techniques for photographers* (Focal Press, 2007) 978-0240808383
- Faris-Belt A — *The Elements of Photography: Understanding and Creating Sophisticated Images* (Focal Press, 2008) 978-0240809427
- Focal Press Staff, Andrews P — *Adobe PhotoShop Elements 7: A Visual Introduction to Digital Photography* (Focal Press, 2008) 978-0240521572
- Freeman M — *Michael Freeman's Perfect Exposure: The Professional's Guide to Capturing the Perfect Digital Photograph* (Focal Press, 2009) 978-0240811710
- Freeman M — *The Photographer's Eye: Composition and Design for Better Digital Photos* (Focal Press, 2007) 978-0240809342
- Hirsch R — *Exploring Colour Photography: A Complete Guide* (Laurence King, 2004) 978-0697292308
- Hirsch R — *Light and Lens: Photography in the Digital Age* (Focal Press, 2007) 978-0240808550

Hirsch R — *Photographic Possibilities: The Expressive Use of Equipment, Ideas, Materials and Processes* (Focal Press, 2008) 978-0240810133

Ingledew J — *Photography (Portfolio Series)* (Laurence King, 2005) 978-1856694322

Kobre — *Photojournalism: The Professionals' Approach* (Focal Press, 2008) 978-0750685931

Lacouture J, Manchester W and Ritchin F — *In Our Time: The World As Seen By Magnum Photographers* (Norton, 1989) 978-0393311297

Langford M, Fox A, Sawdon Smith R — *Langford's Basic Photography: The Guide for Serious Photographers*, 8th Edition (Focal Press, 2007) 978-0240520353

Lea D — *Creative Photoshop: Digital Illustration and Art Techniques* (Focal Press, 2007) 978-0240520469

MacCleod S — *Basics Photography: Post-Production Black and White* (AVA Publishing, 2007) 978-2940373055

Peres M — *The Focal Encyclopaedia of Photography*, 4th Edition (Focal Press, 2007) 978-0240807409

Russotti P — *Digital Photographic Workflow* (Focal Press, 2009) 978-0240810959

Salvaggio N — *Basic Photographic Materials and Processes*, 3rd Edition (Focal Press, 2009) 978-0240809847

Staver B and Farace J — *Better Available Light Digital Photography: How to Make the Most of Your Night and Low-Light Shots* (Focal Press, 2008) 978-0240809991

Stoppee B and Stoppee J — *Stoppees' Guide to Photography and Light* (Focal Press, 2008) 978-0240810638

Tarrant J — *Understanding Digital Cameras: Getting the Best Image from Capture to Output* (Focal Press, 2008) 978-0240520247

Zakia R — *Perception and Imaging: Photography — A Way of Seeing* (Focal Press, 2007) 978-0240809304

Journals

Creative Camera

Creative Review Centaur

Pixel Magazine

Professional Photographer

The British Journal of Photography

Websites

www.adobemag.com — Adobe magazine

www.artsandlibraries.org.uk — art galleries and libraries

www.artscouncil.org.uk — Arts Council of England

www.bbc.co.uk — the BBC website provides access to related resources via its own sub-directory

www.bis.gov.uk — Department for Business Innovation and Skills

www.ccc.acw.org.uk — Arts Council of Wales

www.dandad.org — design and advertising website

www.englishandmedia.co.uk — English and Media Centre website, containing resources and publications

www.hse.gov.uk — the Health and Safety Executive

www.medialearners.com — information about media industries, production, qualifications, and an extensive database of links to other relevant sites

www.publishers.org.uk — the Publishing Association

www.rps.org — the Royal Photographic Society

www.skillset.org — the Sector Skills Council for the creative media sector references a wide range of supportive advice and material relative to employment and media industries

Useful organisations

Associated Press, 12 Norwich Street, London EC4A 1BP

The Documentary Photography Archive, Tylecote Building, Cavendish Street, Manchester M15 6BG

Magnum Photo Agency, 2nd Floor, Moreland Building, 5 Old Street, London EC1V 9HL

National Museum of Photography, Film and Television, Princes View, Bradford BD5 0TR

Royal Photographic Society, The Octagon, Milsom Street, Bath BA1 1DN

Victoria and Albert Museum, Exhibition Road, South Kensington, London SW7 2RL

Unit 33: Pre-production Techniques for the Creative Media Industries

Unit code: J/502/5694

QCF level: 3

Credit value: 5

Guided learning hours: 30

Unit aim

This unit will develop learners' understanding of and skills in pre-production. The unit covers planning and resourcing requirements for production and post-production, how to locate resources and how to organise their deployment. Learners will also develop their understanding of health, safety and legal issues in relation to pre-production.

Unit introduction

Pre-production, which mainly involves research and planning, is a vital ingredient of any successful media product. For example, the successful completion of a photographic fashion shoot for a magazine depends on locations, material and talent being available for the work to be undertaken. Successful location recording of video material depends on crew members and talent being in the right place at the right time. Good pre-production is vitally important where expenses are being incurred for people and materials and where budgets and deadlines are to be met.

Pre-production is generally undertaken by producers and their teams. A team could consist of a number of staff from location managers to set designers. All of them have a vital part to play in the production of a media product. Their work will include drawing up outline budgets and funding strategies, finding factual information, additional material and contributors, using archives, researching locations, undertaking risk assessments, and organising and co-ordinating logistics.

Through following this unit learners will develop an awareness that any media production operates within limitations regarding time, facilities, personnel and budget. They will learn how to identify the requirements of a media production, and how to plan for the provision of those requirements. They will also learn that successful pre-production involves ensuring that all the various elements for production are in the right place at the right time.

Additionally, the unit will enable learners to conduct production risk assessments and develop an awareness of the rights and responsibilities of producers and other media professionals.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand requirements for a specific media production	1.1	outline requirements and sources of requirements for a specific media production
2	Be able to prepare pre-production documentation for a specific media production	2.1	generate outline pre-production documentation for a specific media production with some assistance
3	Be able to apply pre-production planning for a specific media production.	3.1	apply pre-production planning to a specific media production working with some assistance.

Unit content

1 Understand requirements for a specific media production

Type of production: eg film, television, video, radio, audio, interactive media, web, computer game, print, photo-imaging

Finance: sources of finance; requirements, eg for equipment, transport, talent, crew, materials, facility hire, clearances

Time: eg deadlines, availability of equipment, availability of personnel, timescales for clearances

Personnel: size of team; roles; skills and experience; resourcing; availability; costs; team or crew CVs

Facilities: eg production equipment, post-production equipment, facility houses, outsourcing; availability; costs

Materials: type, eg original materials, archive and library materials, photo-library materials, sound library materials, internet, assets, audio, script, animatics, graphics, interviews, costumes, properties, recorded music; sources; costs; clearances

Contributors: type, eg specialists, experts, talent, public; contributor biographies

Locations: identification; recces; limitations and risks, eg distance, access, cost, weather

Codes of practice and regulation: clearances, eg Mechanical Copyright Protection Society (MCPS), model releases, location permissions; legal, eg copyright, health and safety; insurance, eg public liability, completion insurance; regulatory bodies, eg Ofcom, Press Complaints Commission (PCC), Advertising Standards Authority (ASA), Pan European Game Information (PEGI), Entertainment Software Rating Board (ESRB), British Board of Film Classification (BBFC); trade unions, eg Producers' Alliance for Cinema and Television (PACT), National Union of Journalists (NUJ), Broadcasting Entertainment, Cinematograph and Theatre Union (BECTU); trade associations, eg The Independent Games Developers' Association (TIGA), Entertainment and Leisure Software Publishers' Association (ELSPA), British Interactive Media Association (BIMA)

2 Be able to prepare pre-production documentation for a specific media production

Procedure: identify finance available; identify personnel needed; identify personnel available; identify resources needed; identify resources available; prepare budget; contract personnel; book resources; prepare schedules; identify health and safety implications; identify legal implications; identify risks to project

Documentation: production documentation, eg scripts, storyboards, mood boards, thumbnails, properties, contact lists, location recces; production schedules; budget; clearances; plans, eg location plans, studio plans; health and safety assessments; risk assessments; contingency plans

3 Be able to apply pre-production planning for a specific media production

Elements of production: logistics; finance; creative processes

Project management: personnel management; resource management; time management; monitoring progress; risk management; crisis management; maintaining documentation

Delivery

This unit is designed to introduce learners to the pre-production process so that they understand the importance of careful preparation for successful production and post-production. They will also need to learn and follow the established codes of professional practice. As this is a mandatory unit the teaching of it should be focused on the pathway being followed, and the finer detail of the content adapted accordingly.

It is intended that, after introducing learners to the basic content, this unit should be assessed through a production unit. Learners will be able to develop their pre-production skills through their work on productions done in several units and in this way they can practise their skills in pre-production any number of times. The tutor can then select the most appropriate evidence to use for assessment of this unit.

The unit could be introduced through group sessions where pre-production techniques are identified and analysed. Class exercises could include learners reviewing a range of media products in order to identify what the pre-production requirements might be for each of them. They could watch films or television programmes, list the job titles in the credits and then identify what each job role involves. Formal briefings should be used to initiate discussion and planning, leading to the development of proposals and treatments. The development of the proposal and treatment might be undertaken through another unit but the underlying detail of the requirements of planning would be identified in relation to the content of this unit.

Learners will need to be made aware of the range of constraints on their pre-production work. This might be through group discussions or individual or group investigations.

The pre-production process requires learners to use documentation to record their investigations or their planning. Tutors should use a range of pre-production document templates for this work. The range of pre-production documentation available should be determined by the tutor and the learner based on relevant industry practice. There are many different areas of the media industry using a wide range of pre-production paperwork. The tutor must ensure that the templates provided are suitable for the media products being developed by their learners.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to pre-production: <ul style="list-style-type: none">• the role of pre-production within the media production process• pre-production within various media forms.
Lectures on resources: <ul style="list-style-type: none">• money• time• personnel• facilities• locations• clearances• copyright (intellectual property)• health and safety• codes of practice and regulation.
Workshop Practical assessment of risks linked to specific locations, scripts, sequences.
Visiting speaker: producer/ production manager from a recent production.
Workshop Study of pre-production documentation from an existing production.

Topics and suggested assignments and activities

Simulation exercise.

Learners create pre-production documentation using existing script, rate cards, unit costs, crew and location availability:

- templates used in centre
- equipment
- personnel
- materials
- time
- locations
- health and safety issues
- risk assessments
- post-production requirements
- budgets
- schedules
- bookings.

Assessment – take responsibility for pre-production of a production taking place in connection with another unit.

Learners will:

- hold a pre-production meeting
- identify requirements for the production and sources of those requirements
- create documentation
- source requirements
- carry out production
- write a report evaluating their pre-production work in the light of the production experience.

Tutorial to evaluate pre-production work.

Assessment

Evidence for assessment

In order to achieve learning outcome 1 learners must identify requirements for a production and their sources. This can be done through a written report, presentation, or a structured audio or audio-visual statement.

A pre-production file, production log and personal evaluation should form the basis of the evidence for the assessment of learning outcomes 2 and 3. Learners will need to maintain a production log containing records of pre-production meetings, discussions, research and briefings. This evidence will be supported by recorded tutor observations.

Tutors should note that it is possible to combine verbal description of some elements of the content with practical demonstration of others.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

All oral presentations must be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will more or less simply list the requirements for a specified production, giving brief indications of where or how the specified requirements will be sourced. This list may contain one or two minor omissions but will be substantially complete. It will not contain any explanation of why the requirements are as they are and there will be only minimal consideration of codes of practice or regulatory issues.

2.1: documentation will cover all the procedures relevant to the type of production being undertaken, but will be brief and lacking in detail. It should be organised sufficiently well for any particular document to be found with reasonable ease.

3.1: learners will apply their planning in such a way that it enables the completion of the product. It should be noted that the quality of the resulting product is irrelevant to the assessment of this unit.

2.1 and 3.1: learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, M1, D1 P2, M2, D2 P3, M3, D3	Dependent on the production assignment	For example, take responsibility for pre-production in the role of production co-ordinator for the production of a short single camera drama.	<ul style="list-style-type: none"> • Portfolio of pre-production documentation. • Production log. • Self-evaluation of the production process. • Assessor observation.

Essential resources

Learners will need access to a well-resourced library/media centre which has media contacts books, rate cards and access to the internet, telephone and email. If possible, this should be within a production office or workshop. Learners will need access to rate cards for facilities and crew and to a set of pre-production documentation templates, including production schedules and logging sheets. A realistic equipment loan system will enable 'virtual' budgeting. The use of 'credits' or 'production money notes' may allow learners to understand the requirement of careful budget control.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Student Book* (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) 978-1846907371

Chandler H — *The Game Production Handbook* (Charles River Media, 2006)

England E and Finney A — *Managing Multimedia: Project Management for Web and Convergent Media, Book 1: People and Processes, 3rd Edition* (Addison Wesley, 2001)

England E and Finney A — *Managing Multimedia: Project Management for Web and Convergent Media, Book 2: Technical Issues, 3rd Edition* (Addison Wesley, 2001)

Gates R — *Production Management for Film and Video* (Focal Press, 1999)

Kindem G and Musburger R — *Introduction to Media Production: From Analog to Digital, Second Edition* (Focal Press, 2001)

Millerson G — *Video Production Handbook* (Focal, 2008)

Mitchell L — *Production Management for Television* (Routledge, 2009)

Roberts-Breslin J — *Making Media: Foundations of Sound and Image Production* (Focal Press, 2003)

Websites

www.bbc.co.uk/dna/filmnetwork/Filmmakingguide — BBC information about film making

www.bectu.co.uk — roles in the media industries

www.celtx.com — free pre-production software

www.primary-film-focus.co.uk/filmproduction.html — information about film production techniques

Unit 34: Radio Studies

Unit code: F/600/6667

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to develop learners' critical awareness of textual and contextual issues in radio, across a range of genres. Learners will examine the wider implications of radio for society, how it is organised, produced and received, as well as its prospects for the future.

Unit introduction

Radio is the oldest and best established of the electronic media. From its early beginnings at the start of the last century, radio has developed into a modern and exciting medium that is every bit as relevant to us today as it was to generations before us. It was radio that first enabled ordinary people to experience live public events in their own homes, to get information while on the move, and to hear celebrities talking as if just to them, person to person. Embracing the latest digital technology has meant huge strides forward in terms of both production and distribution, and whether beamed across huge areas by powerful transmitters, accessed through podcasts over the internet or downloaded to mobile phones, radio programming can sound as engaging and original today as it did to previous generations.

It is not absolutely vital to have a knowledge of the history of radio or to be able to analyse radio output from an intellectual or academic perspective in order to work effectively in the industry. However, most of those who do work in it find that this sort of knowledge and understanding helps to inform their work and deepen the pleasure they take in the work of others. Media theory is also a key component of Foundation or Honours degrees in this field.

In studying the theory of radio, key issues of media studies will be explored in a number of radio contexts.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the development and institutional contexts of radio	1.1 describe the key historical and institutional contexts for radio
2 Understand the use of codes and conventions in a range of radio genres	2.1 describe the use of codes and conventions of radio genres with some appropriate use of subject terminology
3 Understand the use of narrative structures in radio	3.1 describe the narrative structures of radio texts with some appropriate use of subject terminology
4 Understand the main theories of ideology and audience that relate to radio.	4.1 describe the main theories of ideology and audience in radio contexts with some appropriate use of subject terminology.

Unit content

1 Understand the development and institutional contexts of radio

Development: transmission and reception technology (Marconi, military communication, domestic radio sets, transistors, AM, FM, stereo, Radio Data System (RDS), Digital Audio Broadcasting (DAB), Digital Radio Mondiale (DRM), through television, internet, podcasting, mobile phones); programming (Marconi Company, BBC, Sarnoff, full service, thematic, international broadcasting, continental stations aimed at UK); regulatory (British Broadcasting Company, Sykes and Crawford Committees, British Broadcasting Corporation, offshore pirates, Independent Local Radio, national and regional commercial radio, community radio); production and post-production technology (migration to digital, automation, syndication, co-location)

Institutional contexts: regulation (Ofcom, BBC, land-based pirates); content issues (taste and decency, scheduling, impartiality); ownership (state, private, independent stations, full-time community radio, group management, takeovers and mergers); employment (staff, freelance, independent producers, volunteers)

2 Understand the use of codes and conventions in a range of radio genres

Genres: in news, music and speech programming, commercials, drama, commentary, phone-ins; built programmes and sequences; sequence formats (eg zoo, shock jock)

Codes: acoustics (indoor, outdoor, reverb, echo, acoustic treatment, studio acoustic, dead zone); atmosphere (to create action, location, mood or era); spot effects (to create action, change of mood); 'white noise'; noise pollution; processing; editing; sound effects; structure; content; style; use of levels to change scene in drama

Conventions: structural (for punctuation, for recognition, for branding); semantic (meaning in tone, pace, combination with other elements)

3 Understand the use of narrative structures in radio

Open and closed structures: in journalism; in interviews; in continuity announcing; in commercials; in drama (single plays, series, serials); voiceovers; commentary

Multi-strand narrative: drama (continuity of multiple storylines, character, cliffhangers); real and fictional time

Alternative narrative structures: non-narrative; non-linear; surreal; impressionistic

4 Understand the main theories of ideology and audience that relate to radio

Ideology: social and capital models (Reith and the public broadcasting ethos, development of commercial radio, decentralisation of broadcasting, liberalisation since 1973, community radio for social gain); imperialism (BBC Empire Service and World Service); impartiality and objectivity (balance and bias); censorship and self-censorship; representation (race, class, age, disability, gender); participation (texts, phone-ins, emails, chat rooms, blogs)

Audience: models of passive and active responses related to radio texts (hypodermic needle, stimulus-response, uses and gratifications models)

Delivery

This unit is likely to be taught through a variety of lectures, tutorials, listening workshops and seminars. Both teaching and learning in this unit can be stimulating and rewarding, as there is plenty of scope for bringing the subject alive through imaginative use of audio playbacks. Today, it is easier than ever to assemble a collection of examples of historical and contemporary clips and extracts, illustrating key stages in the development of the medium, genres, common codes and conventions and the impact of ideology on institutions and broadcasters alike.

A systematic approach to the use of these examples would most effectively promote learning, and learners could be encouraged to conduct their own guided investigations, finding examples of their own before presenting their findings in an open forum. They should then collate evidence of their achievement, showing how they have met the assessment criteria for the unit.

It is important to note that the most rewarding approaches to understanding radio result from covering a range of examples of different genres and styles. Therefore, tutors and learners should investigate and work on different genres and theories, rather than picking a single topic at a time, which is often rather limiting in the development of systematic knowledge and understanding. Learners should cover at least two genres for learning outcome 2, and at least two theories for learning outcome 4, but in each case the best work will consider a wider range than that while concentrating in depth on at least two.

As well as relating their investigations to conventional sources, learners should be encouraged to carry out their own research among different age groups. They may have relations or other contacts who remember crucial eras in the development of radio, for example, and can describe what it was like to experience some of the key developments first hand.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
History of radio – whole class lectures and playback of examples.
Institutional contexts for radio – whole class lectures and playback of examples.
<p>Assignment 1 – Historical Developments and Institutional Contexts.</p> <p>Learners are to prepare and deliver a briefing for an investor considering investing in the radio industry – either in commercial radio or in an independent production company intending to make programmes.</p> <p>Learners will:</p> <ul style="list-style-type: none">• receive an assignment brief• research the history of radio and focus on key events and historical developments• research the institutional contexts of radio and focus on key elements within the industry today• prepare materials for presentation in a form which allows them to be submitted as permanent evidence for the purposes of assessment and moderation• present their findings for assessment• receive assessment feedback and have further opportunities to address grading criteria.
Codes and conventions – whole class lectures and playback of examples.
<p>Assignment 2 – Briefing an Investor: Codes and Conventions.</p> <p>Learners are to prepare and deliver a briefing for the investor, focusing on codes and conventions in radio genres.</p> <p>Learners will:</p> <ul style="list-style-type: none">• receive an assignment brief• research the codes and conventions in radio genres• prepare materials for presentation in a form which allows them to be submitted as permanent evidence for the purposes of assessment and moderation

Topics and suggested assignments and activities

- present their findings for assessment
- receive assessment feedback and have further opportunities to address grading criteria.

Narrative structures – whole class lectures and playback of examples.

Assignment 3 – Briefing an Investor: Narrative Structures in Radio.

Learners are to prepare and deliver a briefing for the investor, focusing on narrative structures in radio.

Learners will:

- receive an assignment brief
- research narrative structures in radio
- prepare materials for presentation in a form which allows them to be submitted as permanent evidence for the purposes of assessment and moderation
- present their findings for assessment
- receive assessment feedback and have further opportunities to address grading criteria.

Ideology and audience – whole class lectures and playback of examples.

Assignment 4 – Ideology and Audience.

Learners are to prepare and deliver a briefing for the investor, focusing on ideology and audience in radio.

Learners will:

- receive an assignment brief
- research ideology and audience in radio
- prepare materials for presentation in a form which allows them to be submitted as permanent evidence for the purposes of assessment and moderation
- present their findings for assessment
- receive assessment feedback and have further opportunities to address grading criteria.

Assessment

Evidence for assessment

Evidence for all the learning outcomes in this unit will include a combination of evaluative and critical comment, which does not necessarily have to be provided by the learner exclusively in written forms. Some evidence for learning outcome 1 might be compiled through production of an audio commentary containing different examples, or as an oral presentation. Learners should be encouraged to sample, investigate and evaluate key developments in radio broadcasting, as well as its current nature. Presentations must be recorded for the purposes of internal and external verification.

The study of codes, conventions and narrative structure for learning outcomes 2 and 3 could usefully focus on a small number of individual texts across at least two different genres. Again, the essay is but one method of presenting findings, and for many learners other methods will be more appropriate.

Learning outcome 4 presents another opportunity for learners to submit their work in alternative formats. Work on ideology might focus on principles and trends, while that on audience could usefully concentrate on selected examples of behaviour.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe the key developmental and institutional contexts for radio. Historical detail will not be extensive but should be accurate. If any simple conclusions are drawn, they will lack breadth of research and depth of understanding. Learners will be able to give a correct outline of the most significant ways in which the main contextual issues have impacted on radio production.

2.1: learners will describe a number of codes and conventions in at least two radio genres. The selection of material for inclusion will lack clear justification at times. Ideas will be simple, often derivative and often lack any clear reconciliation with the practicalities of radio production. The work will demonstrate only basic presentation and technical skills, and, while there may be occasional faults, should not contain substantial errors of fact or implication.

3.1: learners will describe common usage of narrative structures in at least two radio genres. The material may be heavily reliant on found material. Work that consists almost wholly of such material will not meet the pass criterion for this learning outcome. There will be only limited evidence of research and investigation, and any conclusions drawn may be unsophisticated, being unsupported by relevant examples.

4.1: learners will describe some of the main theories of ideology and audience, but in terms that show only a rudimentary awareness of their relationship to radio. They should be able to identify a small number of implications for radio but their engagement with the subject matter will lack sophistication of understanding, awareness or explanation.

2.1, 3.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Historical Developments and Institutional Contexts	Prepare and deliver a briefing for an investor considering investing in the radio industry – either in commercial radio or in an independent production company intending to make programmes for the BBC.	<ul style="list-style-type: none"> • Collated research data and conclusions. • Presentation slides and notes. • Presentation (recorded).

Criteria covered	Assignment title	Scenario	Assessment method
2.1	Assignment 2 – Briefing an Investor: Codes and Conventions	As above.	<ul style="list-style-type: none"> • Collated research data and conclusions. • Presentation slides and notes. • Presentation (recorded).
3.1	Assignment 3 – Briefing an Investor: Narrative Structures	As above.	<ul style="list-style-type: none"> • Collated research data and conclusions. • Presentation slides and notes. • Presentation (recorded).
4.1	Assignment 4 – Ideology and Audience	As above.	<ul style="list-style-type: none"> • Collated research data and conclusions. • Presentation slides and notes. • Presentation (recorded).

Essential resources

Learners will need access to radio or audio production and post-production facilities if they wish to illustrate their work with examples.

Listening to broadcasts may be done in class or individually via conventional or digital radio receivers, through digital television platforms or over the internet.

Suggested information sources include the library, websites, visiting speakers from the industry and reports and publications direct from Radio Joint Audience Research (RAJAR), the Radio Centre and the Community Media Association (CMA), as well as radio stations, journals and the trade press.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Chignell, H — *Key Concepts in Radio Studies* (Sage, 2009) 978-1412935173

Crisell A — *An Introductory History of British Broadcasting* (Routledge, 1997) 978-0415247924

Crisell A — *Understanding Radio, 2nd Edition* (Routledge, 1994) 978-0415103152

McLeish R — *Radio Production, 5th Edition* (Focal Press, 2005) 978-0240519722

Starkey G — *Radio in Context* (Palgrave Macmillan, 2004) 978-1403900234

Starkey G — *Balance and Bias in Journalism: Regulation, Representation and Democracy* (Palgrave, 2007) 978-1403992482

Journals

Broadcast — [/info.broadcastnow.co.uk/](http://info.broadcastnow.co.uk/)

Media Guardian — www.guardian.co.uk/media

The Radio Journal: International Studies in Broadcast and Audio Media — www.radiostudiesnetwork.org.uk/journal.html

The Radio Magazine — www.theradiomagazine.co.uk/

Websites

www.bbc.co.uk/radio — portal for BBC Radio

www.mediauk.com/radio/ — Media UK directory

www.oldtimeradio.com — archive recordings from the early years of radio

www.radioacademy.org — the Radio Academy

www.radiocentre.org/ — trade body for the commercial radio sector

www.radiostudiesnetwork.org.uk/ — academic network

Unit 35: Research Techniques for the Creative Media Industries

Unit code: L/600/6669

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop understanding of and skills in research relevant to creative media production. Learners will present their findings in both written and oral forms and will learn how to cite and reference their sources.

Unit introduction

Research is fundamental to all aspects of creative media production and is the essential starting point to productions of any scale. It can be used to determine the financial viability of a future production, to gather a range of information relevant to the content of the production, or to assist with the planning of technical and logistical requirements.

There are also media companies which conduct extensive research using a range of sophisticated methods to gather data about audience consumption of media products and services. This has become increasingly necessary in the highly mixed and competitive environment of the media industries.

Learners who are looking for a job which requires research skills might consider employment in a research agency, or in pre-preproduction for radio, television or film, whilst a knowledge and understanding of research techniques is vital in a number of roles in advertising and marketing. They are also, of course, important in journalism. However, some ability to undertake research is essential for anyone working in the media industries.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the nature and purposes of research in the creative media industries	1.1 describe the nature and purposes of research in the creative media industries with some appropriate use of subject terminology
2 Be able to apply a range of research methods and techniques	2.1 apply research methods and techniques with some assistance
3 Be able to present results of research.	3.1 present results of research.

Unit content

1 Understand the nature and purposes of research in the creative media industries

Types of research: quantitative research, eg programme ratings, readership circulation figures, hits on a website, box office figures, sales of CDs and DVDs; qualitative research, eg film reviews, game reviews, fanzine websites, attitudes to media products, responses to news coverage, responses to advertising campaigns, discussion

Methods and sources of research: secondary research (books, journals, reference based books and directories, periodicals, newspapers, film archives, photo libraries, worldwide web, searching internet forums, CD Rom databases, audio material, ratings, circulation figures, government statistics, data gathering agencies, eg Broadcasters' Audience Research Board, Radio Joint Audience Research Ltd, ABC); primary research (interview techniques, observations, questionnaires, surveys, types of questions, focus groups, audience panels, participation in internet forums, self-generated, eg own video, audio or photographic records of events)

Purposes of research: audience research (audience data, audience profiling, demographics, geodemographics, consumer behaviour, consumer attitudes, audience awareness); market research (product market, competition, competitor analysis, advertising placement, advertising effects); production research (content, viability, placement media, finance, costs, technological resources, personnel, locations)

2 Be able to apply a range of research methods and techniques

Secondary research: quantitative research, eg programme ratings, readership circulation figures, hits on a website, box office figures, sales of CDs and DVDs; qualitative research, eg film reviews, game reviews, fanzine websites, attitudes to media products, responses to news coverage, responses to advertising campaigns, searching internet forums

Primary research: quantitative research, eg questionnaires, surveys; qualitative research, eg interviews (face-to-face, telephone, email), focus groups, participation in internet forums, audience panels; self-generated, eg observations, own video, audio or photographic records of events

Audience research: audience classification (socio-economic, geodemographic, psychographic, ethnographic, age, gender, sexual orientation, occupation, education); media preferences; product preferences; buying patterns

Market research: product market; competition; competitor analysis; advertising placement; advertising effectiveness

Production research: content; resources, eg personnel, talent, finance, suppliers, facilities, locations, logistical support; costs; viability; placement, eg publication, broadcast, webcast, podcast, audience

Interpreting results: collate; evaluate; summarise

3 Be able to present results of research

Format: written report; oral presentation, eg individual, group, PowerPoint, overhead transparencies, multimedia, video diary, audio diary; illustration, eg graphs, pie charts, bar charts, graphics, video clips, audio clips

Content: procedures; data; findings; conclusions; proposals

Quotation and reference: bibliography styles, eg Harvard, Modern Languages Association (MLA), American Psychological Association (APA); quotation and citation; footnotes; acknowledgements; credits; appendices; acknowledgement of copyright material, eg print, film, video, audio, photographs, published letters; disclaimers

Delivery

The first part of this unit introduces learners to the reasons for research in the media industries. Whilst some of this material can be taught through fairly formal means there are opportunities for learners to put their own research skills to use in exploring, for example, the purposes for which market research is carried out. Thinking about why and how production research is undertaken can, perhaps, be more profitably linked to learners' own production activity in other units.

In covering learning outcome 2, learners should be encouraged to engage with a range of research methods both independently and through group tasks. Where possible it would be useful for the class as a whole to visit archives and specialist libraries such as the British Library or the Reading Room of the National Film Theatre.

Again, learners will gain a greater understanding of the range, purpose and limitations of research methods and techniques if the learning is linked to projects being undertaken for other units. In preparing a proposal or treatment for film, radio or television production, for example, learners could work in small groups. Each group should employ a range of primary and secondary research methods to explore the viability of the proposal. If, for example, learners were researching material and ideas to produce a proposal and treatment for a new radio comedy, then it would be expected that they would listen to radio comedy as part of their primary research. In considering secondary sources learners would look at data such as that produced by RAJAR. It is vital, of course, that individual learners keep a record of this research work in their portfolios for assessment purposes.

When the research is completed a small presentation to the whole class could be set in order to enable learners to share what they have learnt from doing the exercise — how their procedures worked, what results they obtained, the comparative value of qualitative and quantitative research methods, etc. In order to engage learners in the vocational relevance of their study primary research methods can also be taught through role plays and simulations such interviews and focus groups.

When presenting the results of their research, learners might be asked to present the process and findings of their research activities in both written and oral forms. One-to-one tutorials present the opportunity to go through learners' notes and portfolios in order to ensure a good range of research activity has been evidenced and to provide opportunities for evaluation and reflection.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to methods and techniques. Learners will: <ul style="list-style-type: none">• receive lecture on and discuss the purposes, types and methods of research in the media industry• visit library for introduction to cataloguing methods, complex web searches, use of journal searches, etc.
Assignment 1 – Research Methods and Techniques. Brief is to write an entry for a reference book on the creative media comparing pros and con of different research methods and techniques. Learners will be given three topics to research. Keeping a research log of their activities, they will then: <ul style="list-style-type: none">• research the topics through conventional resources available in a library• research the topics through any other appropriate means available• research the topics through the internet• collate all notes in research log• write entry.
Talk on formulating research strategies: <ul style="list-style-type: none">• purposes of research• methods and techniques appropriate to different purposes.
Talk and mini tasks on citation and bibliographies.
Talk on presenting research.

Topics and suggested assignments and activities

Assignment 2 – Undertake Research.

Introduction to assignment

Task 1: propose a strategy for researching a new product launch.

In small groups learners will:

- determine purpose of research project
- determine methodology to be used
- present strategy to class.

Task 2: undertake secondary research.

In small groups learners will:

- undertake secondary audience and market research using both web and conventional sources to determine possible market opportunities
- generate ideas and form an initial proposal for the product launch.

Task 3: undertake primary research.

In small groups learners will undertake primary audience and market research to develop the proposal and determine its viability. This could include:

- preparing questionnaires
- testing questionnaires on peer group and revising accordingly
- collecting live responses to questionnaires from target audience
- collating results
- developing proposal and undertaking production research to ascertain viability
- presenting proposal to small focus group and collecting primary qualitative research.

Assignment 3 – Present Research.

Learners will:

- assemble portfolio of research work (learners should clearly document their individual contribution and ensure work uses correct citations and bibliography)
- develop presentation of research findings
- give oral presentation of research findings and conclusions to class.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of learning outcomes 1 can come from presentations both written and oral. For some learners a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Evidence for achievement of learning outcome 2 can come from notes and research trails, research logs and diaries of research processes and techniques as well as the material gathered. More creative and independent responses will come from learners who take the initiative to make contact with relevant individuals who can be interviewed and from those learners who undertake visits to archives and specialist libraries themselves.

Evidence for achievement of learning outcome 3 is likely to be in the form of a presentation, a written report, or both.

Presentations must be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will outline the main purposes of research, covering audience research, market research and production research. They will also outline the main methods and sources of research covering primary, secondary, qualitative and quantitative. All aspects of these descriptions will be accurate and relevant. Whatever is being dealt with will be covered substantially — though not necessarily absolutely completely. Concerning the purposes of research, a learner might write, 'There are a lot of reasons for researching in the media industries. If you are making a film or game you have to research to find out who your audience is, and who your competitors are. You also need to find out how much it will cost you to make it and if you have the right equipment.' Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: learners will apply some research methods, such as surveys or questionnaires, to obtain useful and relevant information. They will be able to use secondary as well as primary sources. Learners will obtain relevant qualitative material but will not evaluate it or draw clear conclusions from it, presenting data and information without reflecting on issues such as influence or bias. Quantitative research will be accurate and relevant but thin. Work at this level is likely to show limited understanding of procedures and is also likely to rely too heavily on internet research. Learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

3.1: presentation of results will be basic, and, in oral presentation of results, delivery will lack confidence. Though visual aids or graphics will be unsophisticated and will typically not be clearly linked to the content of the presentation or report they will nonetheless provide the basic relevant information. Findings are likely to be basic and conclusions drawn will be assertions lacking support. Referencing and citation of sources may typically be incorrectly formatted and imprecise.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Research Techniques and Methods	Entry on research techniques and methods for a reference book on the creative media.	<ul style="list-style-type: none"> • Preparatory notes. • Reference book entry.
2.1	Assignment 2 – Undertake Research	Working for a market research company learners have been asked to conduct research for a new product launch. (Product could be made relevant to pathway as required.)	<ul style="list-style-type: none"> • All preparatory work and notes. • Minutes of meetings. • Strategy proposal. • Questionnaires. • Collated results. • Presentation slides and notes. • Record of presentation.

Criteria covered	Assignment title	Scenario	Assessment method
3.1	Assignment 2 – Present Research	As above.	<ul style="list-style-type: none"> • Preparatory notes. • Presentation slides and notes. • Record of presentation.

Essential resources

This unit will require access to public and specialist libraries and archives as well as the internet.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Bertrand I and Hughes P — *Media Research Methods: Audiences, Institutions, Texts* (Palgrave Macmillan, 2004) 978-0333960950

Blaxter L et al — *How to Research* (Open University Press, 2006) 978-0335217465

Danscombe M — *The Good Research Guide* (Open University Press, 2007) 978-0335220229

Davies M — *Doing a Successful Research Project: Using Qualitative or Quantitative Methods* (Palgrave Macmillan, 2007) 978-1403993793

Dawson C — *A Practical Guide to Research Methods* (How To Books Ltd, 2007) 978-1845282301

Kumar R — *Research Methodology: A Step-by-Step Guide for Beginners* (Sage Publications, 2005) 978-1412911948

Sparkes G — *Media Effects Research: A Basic Overview* (Wadsworth, 2009) 978-0495568544

Wimmer R D and Dominick J R — *Mass Media Research: An Introduction* (Wadsworth, 2005) 978-0534647186

Journals

Electronic Journal of Business Research Methods

Qualitative Market Research

Research Magazine

Websites

www.alertnet.org/aletnet.nsf — Reuters news agency

www.archive.org/ — an internet archive site

www.bbcfootage.com — BBC film archives

www.britmovie.co.uk — British movie archive

www.businessballs.com — a great business site with lots of info on research techniques, demographics, etc

www.gamasutra.com — a sister publication to the print magazine Game Developer

www.guardian.co.uk — The Guardian and The Observer

www.imdb.com — internet movie database

www.monitor.bbc.co.uk — BBC Worldwide News Monitoring

www.rcuk.ac.uk/ — research councils site

www.red3d.com/cwr/games — portal site with links to game research and technology

www.research.scea.com — Sony game research

www.research-live.com/ — Research Magazine

Unit 36: Sound for Computer Games

Unit code: L/502/5776

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to introduce learners to how sound is designed and produced for games. Learners will investigate the use of sound and music in games and explore sound production methods. Learners will design and produce appropriate original sounds for a game and will integrate these sounds and stock audio content into a scene of a game.

Unit introduction

The games industry can be a very exciting and dynamic place for musicians and sound designers. Video games have become a new way of telling stories and game audio is fundamental to this. Game audio is there to drive the action. Through sound and music, a game can completely immerse a player in another universe or reality. The creative freedom to manipulate moods and environments is limited only by the technical capabilities of the machine and a composer's imagination. While being creatively liberating, interactive game audio can also be technically demanding. Designing audio and composing music for games can often be much more challenging than designing for motion pictures.

Games technology changes constantly and with every new development each new game title tries to outperform the previous one. As technology improves, every game title attempts to implement new ways of making games faster, bigger and louder than before; this means constantly adapting to new techniques of producing sound and music for games. The soundtrack for games is becoming like that of feature film music — developers are using techniques where characters have personal themes and signature instruments. Game world locations and destinations with highly recognisable ambient and musical settings will begin to develop and expand, including the implementation and development of interactive (true adaptive) music to next-generation games.

More processor memory is being devoted to sound and music in video games, allowing sound designers to match the richness of the visuals and make a more epic sound experience for the player. A future of game audio lies in the addition of Foley. The introduction of Foley to game audio creates a more complex sound experience which captures increasingly realistic

human sounds. A character moving around in a first-person shooter game has the illusion reinforced by having the armour jingling, the gun clinking, the sound of boots on the hard crunching snow and the use of music to create mood and provide audio cues.

In this unit learners will understand how sound and music are used in a game. They will develop an understanding of how sound is designed and produced for games. Learners will design and produce appropriate original sounds for a game and will integrate these sounds and stock audio content into a scene of a game.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the use of sound and music in games	1.1 describe uses of sound and music in games using some subject terminology appropriately
2 Understand methods and principles of sound design and production	2.1 describe methods and principles of sound design and production using some subject terminology appropriately
3 Be able to create sound assets for a computer game following industry practice	3.1 create sound assets for a computer game following industry practice, working within appropriate conventions and with some assistance
4 Be able to apply sound assets to a computer game following industry practice.	4.1 apply sound assets to a computer game following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand the use of sound and music in games

Theory of sound: waveform (wavelength, amplitude, frequency); pitch; Hertz (Hz); decibel level (dB); sound generator (loudspeaker)

Psychology of sound: emotion; mood; perception; loudness; timbre; film and game parallels (early cinema, contemporary cinema); sound as information, eg speech, iconic, symbolic, metaphoric

Audio environment: creating ambience; atmosphere; communicating what producer wants the listener to know or experience; 3D audio; surround sound; interactive adaptive audio

Sources: Foley artistry; sound libraries; original development; stock music assets

Game music: purpose, eg mood, action, suspense; intro sequence; closing sequence; credit sequence; plot advancement; interactive adaptive music

Legal issues: copyright; licences; ancillary rights; royalties; property rights; talent release contract

2 Understand methods and principles of sound design and production

Sound design methodology: Foley artistry; sound libraries; original development

Sound file formats: uncompressed, eg wav, aiff, au, smp, voc; lossy compression, eg mp3, ra, vox

Audio limitations of game platforms: sound processor, eg sound processor unit (SPU), digital sound processor (DSP); random access memory (RAM); storage; software development kit; sample rate; file format; audio output (mono, stereo, surround); direct audio (pulse code modulation (PCM)); adaptive delta pulse code modulation (ADPCM); file size

Audio recording systems: analogue; digital, eg MiniDisc™, compact disc (CD), digital audiotape (DAT), hard disc; computer audio workstation; multi-track systems; musical instrument digital interface (MIDI); software sequencers; software plug-ins; sound editors; sound modules; midi keyboard instruments

Audio sampling: file size constraints (resolution, bit-depth); sample rate; mono; stereo; surround

3 Be able to create sound assets for a computer game following industry practice

Plan: considerations, eg genre, sample rate, resolution, stereo or mono, processor effects, ambient sound, speech, voiceover; sound list, eg audio storyboard; asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Recording sound: recording log; recording (fieldwork, Foley effects, voiceovers, studio)

Audio levels and metering: meters, eg VU meter, peak program meter; standard operating level

Sound manipulation: editing, eg cut, copy, paste, trim, channel mixer, cue points, markers; effects, eg amplify, chorus, cross fade, delay, echo, fade in/out, invert, envelope, normalise, pan, reverb, reverse, resample, silence; time and pitch, eg Doppler, stretch; filters, eg pass (band, high, low), notch, noise reduction, pop/click, equalisation; layering; loops; cue list; playlist; mix down

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities); production skills (ideas generation, workflow and time management, technical competence, teamwork)

4 Be able to apply sound assets to a computer game following industry practice

Asset management: importing; organising (file storage and retrieval, naming conventions)

Edit audio: audio library material, eg sound libraries, stock music assets; studio produced audio, eg Foley effects, voiceovers, fieldwork

Integrate audio: synchronising sounds, eg actions, on-screen movement, cut-scene; lip-synching

Audio production: mixing; rendering

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities); production skills (ideas generation, workflow and time management, technical competence, teamwork)

Delivery

This unit is designed to provide learners with knowledge of how sound and music are used in a game to enhance the player's experience. Learners will develop an understanding of why sound and music are used and how each is designed and produced for games and for game elements.

The unit could be taught with a variety of activities within the teaching sessions. There will be a need for lectures, discussion and demonstrations as well as practical sessions. Learners will need to experience the use of sound and music in games. This is best achieved via structured gameplay using a wide variety of game genres on a range of platforms. Research will include the internet as well as taking part in the playing of a wide variety of games. Learners should focus on how sound and music are used to enhance the player's experience. Although this game playing is an essential aspect of research in this unit it must not outweigh the other methods of learning. When playing games, the learner must understand the specific reason for such play. Viewing films from a wide spectrum of cinema and experiencing their use of sound and musical score will support the learners' understanding of the use of Foley artistry and how musical score is central to creating mood for a given scene or situation.

It is suggested that teaching follows the order of the learning outcomes, first addressing the use of sound and music, followed by the way sound is designed and produced. Learners should then produce original game audio content, finally using this audio content by synchronising the sounds into a game element. A game element in this context is a cut-scene animation, on-screen movement, actions or lip-synching.

Following initial lectures, learners will need to comment on the use of sounds and music they have experienced during structured gameplay sessions. A wide range of game genres should be used to show how genre may affect the type of sounds and music used. It may be desirable to focus the learner's attention systematically; by experiencing a game which best exhibits the use of sounds or design methodology being studied, before focusing attention on a different use of music or sound design methodology of a different game. In parallel, learners must read widely from the literature available in print and online, and should be encouraged to use technical language in their descriptions of the use of sound and music in games or the sound design and production theory under discussion.

It is essential that learners produce original audio content from their interpretation of a creative brief. The brief will give the learner essential information on the general theme of the game, its genre, musical moods, ambience, sound effects, voiceovers etc that may be required for the game. To promote best practice, centres are strongly encouraged to ensure that learners use file naming conventions and produce sound lists using audio storyboards.

To produce original game audio content, learners must have the opportunity to generate sounds from fieldwork, Foley artistry and voiceovers using a range of audio recording systems. Recording logs should be encouraged as they are a fundamental tool used in the games industry to document essential information of recording sessions. Learners must manipulate their original audio content using sound editing software to produce a personal audio library.

Learners must have the opportunity to integrate and synchronise audio content for a game element. Where possible, learners should be encouraged to use their original game audio content, synchronising it to a game element. For example, learners could synchronise audio content to actions, on-screen movement, or a cut-scene.

All projects in this unit should be supported with ongoing technical exploration of the use, design and production of sound in games. Outside visits and talks by industry professionals should be included where appropriate.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to use of sound and music in games. Learners: <ul style="list-style-type: none">• receive lectures, hold discussions and attend demonstrations to examine how sound is used to create atmosphere in a game• receive lectures and hold discussions to explain how musical score is central to creating mood in a game• receive lectures to explain the legal issues to be considered when producing sound for computer games• play computer games which exhibit the use of sound and music to good effect, make notes and discuss observations.

Topics and suggested assignments and activities

Assignment 1 – Noise Art: The Use of Sound and Music in Games.

Learners will write an article for an online computer game ezine on sound in computer games and how game designers use sound and music to enhance a player's gameplay experience.

Article will cover:

- theory of sound
- psychology of sound
- game music
- creating the audio environment
- sources of sound and associated legal issues.

Introduction to sound design and its production.

Learners:

- receive lectures and hold discussions to explain the processes involved in producing sound and music for games.

Assignment 2 – Sound Design and Production.

Learners will write an article for an online computer game ezine on the processes involved in producing sound and music for games.

Article will cover:

- sound design methodology
- sound file formats
- audio limitations of game platforms
- audio recording systems
- audio sampling.

Workshop sessions to develop practical sound recording and manipulation skills:

- introductory lecture covering skill to be developed in session
- interpreting creative briefs to plan audio content
- sound generation
- sound manipulation.

Introduction to integrating and synchronising audio content for a game element using original game audio content.

Learners undertake exercises in:

- editing audio library materials
- integrating and synchronising sounds.

Topics and suggested assignments and activities

Assignment 3 – Sounds for 2D Casual Game Demo.

Working individually learners will respond to a brief to create sound for a computer game.

Learners will:

- plan sound in response to given brief
- create sound assets required
- edit, manipulate and integrate game audio
- complete audio production
- give presentation of work including review of own game audio work.

Unit learning and assessment review.

Assessment

Evidence for assessment

In order to produce evidence for assessment of achievement of learning outcomes 1 and 2, learners could collate and present researched information via a presentation or a report explaining, in relation to learning outcome 1, how game designers use sound and music to enhance a player's gameplay experience and, in relation to learning outcome 2, the processes involved in producing sound and music for games. Research may include extracts from books, journals, articles, material published on the internet or trade publications. Presentations must be recorded for the purposes of internal and external verification.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Evidence to assess achievement of learning outcome 3 will be original audio content generated using each of the three sound generation methods specified in the unit content. 'Original' means that it is the learner who has generated the sound, not that the sound has never been used before in a game. It is expected that a minimum of ten original sounds would be produced in total.

For learning outcome 4 the sound will be game audio content derived from audio library and studio produced sounds.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: the evidence produced will describe both the use of sound and the use of music in games, though the evidence will not be related through examples to particular games. As a minimum, learners must give correct descriptions of how sound and music are used in games and must address, albeit at a basic level, the psychology of sound, audio environment, sources and game music. A learner might note, for example, 'Music sets the mood, the themes and the emotions of a game, whilst the sound effects bring the movements and actions to life.'

2.1: learners will correctly describe processes involved to produce sound and music for games with sufficient clarity to be understood and using some appropriate subject terminology, though the evidence will be basic and not related through examples. For instance a learner might comment, 'Sound for games only became important with the arrival of the 8-bit consoles. Early game consoles used a 1-bit processor and could only create a single sound like a beep... Cartridge-type games do not require much space for sound.'

1.1 and 2.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

3.1: the original audio content to be generated will be identified through the learners' interpretation of a creative brief and through consultation with the client. To achieve a pass, the audio must be produced with some consideration of the brief. A learner might produce, for example, a Foley gunshot effect in response to a brief requiring gunfire for a game, but the Foley effect when recorded will include inappropriate background noise. Learners will keep a basic log of their recorded content (their 'recording log'). The learner will document their use of sound editing software to manipulate each sound recorded. The learner's use of the manipulation tools used to produce their original audio content will be basic — for example, cut, copy, paste, silence, fade, trim, echo and pan. This evidence could be presented via a document with screen grabs and annotation or screen capture software with voiceover.

4.1: learners will use sounds sourced from both audio library and studio produced sounds, though they will have integrated audio only into a game element without making any attempt to further edit sounds to ensure they fully match with overall actions, on-screen movement, or cut-scene. For example, where dialogue has been used in a scene portraying a character speaking in a large hall, the learner may have correctly applied and integrated the sound but without any echo effect to give a sense of atmospheric context.

3.1 and 4.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. When engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Noise Art: the Use of Sound and Music in Games	Article on use of sound and music in games for online computer game ezine.	<ul style="list-style-type: none"> All preparatory notes. Article as word processed or electronic document.
2.1	Assignment 2 – Sound Design and Production	Article on sound design and production in computer games for online computer game ezine.	<ul style="list-style-type: none"> All preparatory notes. Article as word processed or electronic document.
3.1 4.1	Assignment 3 – Sounds for 2D Casual Game Demo	Brief from client to produce sound for a 2D casual game demo.	Development log containing: <ul style="list-style-type: none"> planning notes. Project portfolio containing: <ul style="list-style-type: none"> recording log unedited sounds manipulated sound assets edited sounds integrated into interactive CD all production documentation development log personal reflective comment.

Essential resources

For this unit learners will need access to a range of games on a variety of platforms. Access to the internet is essential for research. Learners will also need access to a range of professional-standard audio recording systems and sound editing software.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Brandon A — *Audio for Games: Planning, Process, and Production* (New Riders, 2004) 978-0735714137

Case A — *Sound FX: Unlocking the Creative Potential of Recording Studio Effects* (Focal Press, 2007) 978-0240520322

Marks A — *The Complete Guide to Game Audio: For Composers, Musicians, Sound Designers and Game Developers*, 2nd Edition (Focal Press, 2008) 978-0240810744

McCuskey M — *Game Audio Programming* (Course Technology, 2003)

Millward S — *Fast Guide to Cubase SX* (PC Publishing, 2005) 978-1870775984

Riley R — *Audio Editing with Adobe Audition* (PC Publishing, 2008) 978-1906005030

Sanger G et al — *The Fat Man on Game Audio: Tasty Morsels of Sonic Goodness* (New Riders, 2003) 978-1592730094

Websites

www.audiosparx.com — online resource for digital audio

www.filmsound.org/game-audio — game audio articles

www.gamasutra.com — respected website for all things game development

www.gamedev.net — a forum, with good articles on all things game development and excellent game developer resources

www.gamecareerguide.com/features/696/adaptive_audio_a_beginners_guide.php?page=1 — game audio article making sounds for video games

www.igda.org — non-profit-making industry body, useful for research and learning support

Unit 37: Sound in Interactive Media

Unit code: Y/502/5778

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to help learners develop skills in planning and creating digital sound for interactive media products using digital sound editing software. Learners will develop an understanding of the use of sound in interactive media products. They will design and produce original sounds for an interactive media product and will integrate these sounds into the product.

Unit introduction

As the interactive media industry develops and expands, the demand for individuals with both the creativity and technological skills to realise effective sound products is increasing. The very nature of most interactive media, such as web content, mobile telephone technologies and computer games, requires that audio content is both appropriate and effective in communicating messages, narratives, mood and tone.

Increasingly within the interactive media industry, individuals are required to be multi-skilled in their approach to work. A good understanding of the impact of sound as well as an ability to incorporate and implement sound production technologies is often a prized capability.

Through following this unit learners will develop skills in planning and creating sound for interactive media products. They will also develop their knowledge of digital sound editing software along with an understanding of the concepts, language and terminology associated with the area.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the use of sound in interactive media products	1.1 describe the use of sound in interactive media using some subject terminology appropriately
2 Be able to devise sound assets for an interactive media product	2.1 generate outline ideas for sound assets for an interactive media product working within appropriate conventions and with some assistance
3 Be able to create sound assets for an interactive media product following industry practice	3.1 create sound assets for an interactive media product following industry practice, working within appropriate conventions and with some assistance
4 Be able to apply sound assets to an interactive media product following industry practice.	4.1 apply sound assets to an interactive media product following industry practice, with some assistance.

Unit content

1 Understand the use of sound in interactive media products

Theory of sound: waveform (wavelength, amplitude, frequency); pitch; Hertz (Hz); decibel level (dB); sound generator (loudspeaker)

Basics of sound recording: signals; signal to noise ratio; analogue distortion; digital distortion; mono and stereo; sound recording media; digital audio file formats, eg .mp3, .wav, mid, .ogg, .wma, .aif

Analogue versus digital: comparison of analogue and digital sound; advantages and disadvantages of production techniques; issues with digitisation of analogue material; quality issues

Applications: interactive media products, eg websites, DVD interfaces, interactive presentations, computer games, mobile phone content

Use of sound: carrying dialogue; enhancing mood or tone; indicators, eg danger, impending action, emotion; guiding users; alerts; entertainment, eg streaming music

2 Be able to devise sound assets for an interactive media product

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; audio storyboard, eg soundscape; identify source, eg own recorded material, fieldwork, studio, pre-recorded material, sound libraries

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, representation (race, gender, religion, sexuality), decency

Asset specification: target audience, considerations, eg purpose, genre, sample rate, resolution, stereo or mono, ambient sound, voiceover, required file naming conventions; sound list

3 Be able to create sound assets for an interactive media product following industry practice

Plan: asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Recording sound: recording log; recording (fieldwork, studio); audio sampling (file size constraints, sample rate, mono, stereo)

Audio levels and metering: meters, eg VU meter, peak program meter; standard operating level

Sound manipulation: importing; editing, eg cut, copy, paste, trim, channel mixer, cue points, markers; effects, eg amplify, chorus, cross fade, delay, echo, fade in/out, invert, envelope, normalise, pan, reverb, reverse, resample, silence; time and pitch, eg Doppler, stretch; filters, eg pass (band, high, low), notch, noise reduction, pop/click, equalisation; loops; cue list; playlist; mixdown

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities); production skills (ideas generation, workflow and time management, technical competence, teamwork)

4 Be able to apply sound assets to an interactive media product following industry practice

Asset management: importing; organising (file storage and retrieval, naming conventions)

Edit audio: audio library material, eg sound libraries, stock music assets; studio produced audio, eg voiceovers

Apply: synchronising sounds, eg actions, on-screen movement, scenes, lip-synching; dub; embed; link to sound file

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities); production skills (ideas generation, workflow and time management, technical competence, teamwork)

Delivery

This unit is intended to develop an understanding of the range of practical applications in digital audio production, the uses for such products and the importance of sound in interactive media. Learners must develop an awareness of the power of digital audio editing and its uses in interactive media applications. They should also investigate how and why sound is used in a range of interactive media applications.

The unit could be taught with a variety of activities and short practical exercises preceded by investigations and research into a range of sound in interactive media applications. This could take the form of group discussions, individual investigations such as case studies, or practical research. Work on learning outcome 1 might begin with whole-group activities such as the analysis of sound within a certain product. A tutor-led walk-through of a sound-rich interactive environment (such as within a first-person shooter videogame or Flash-heavy website) with learners identifying the sound within the product would be a good starting point. This could lead on to activities separating the sound from the other elements of a product. It might be interesting at this point for learners to consider how sound can be *misused* — for example, the way in which keypad tones on mobile phones can be annoying to other people. They could be asked to consider whether the handset manufacturers should disable the sounds by default and allow the user to switch them on if required, rather than the other way around, given that a lot of people seem not to know how to disable them.

The playback of sound elements without other content for analysis of mood or tone may be of assistance, as may the viewing of visual and interactive elements without sound. Group members could benefit from making suggestions as to the purpose of sound within a product looking at narrative support, tone creation and selection confirmation (in DVD menus or websites, for example). Considerations of haptic involvement with many interactive products and the vital link between this and sound content would be of great value. Learners exploring the dynamic link between touch and sound activation (key presses on mobile phones, action sound effects on computer games) would gain a good understanding of the key role it plays in many interactive products. Drawing a sound map may also be of use: annotating the visual elements of a screen on a printout of a screen-grab, highlighting where interactive sound elements are activated, and defining how and why these are used would be an ideal way of beginning the documentation process of this element of the unit.

Learning outcome 2 focuses on the generation of ideas and outline planning to assist in the creation of sound assets; learners will benefit from careful guidance on both the value of such a process and the requirements of professional practice. Looking at exemplar documents such as project proposals and resource-planning sheets would be of great use. Due to the evolving nature of this area, many individuals and companies implement their own planning material and processes. It might, therefore, be advisable to implement a 'house-style' for such procedures and encourage learners to follow this pattern — perhaps through the formulation of in-house documentation. In order to ensure that learners are given the opportunity to reach the higher levels of attainment, however, tutors should ensure that all elements of preparation are considered carefully and documented efficiently.

Given the requirements to incorporate sound into an actual interactive media product, it is vital that learners have a clear idea about the nature of the product they are developing sound for. The planning documentation should not require a great deal of planning surrounding the product as a whole, but should focus closely on the audio content within it. It might, therefore, be beneficial to teach this unit alongside other units that are focused on developing different elements of an interactive media product. This would allow learners to develop a grasp of a product as a whole, drawing out the audio work completed for this unit.

Alternatively, tutors could present learners with a silent interactive media product and set them the brief of implementing the audio elements for it. This would allow tutors to provide a 'client' relationship with learners and allow specific focus on the audio work rather than concern over the product as a whole.

In preparation for the practical production of sound elements, learners should be introduced to the practices and concepts at the heart of current digital audio editing. A tutor-led session followed by a workshop-based approach might be appropriate for this, allowing learners to learn basic skills and techniques and then experiment and work with them. Learners should document their progress through this stage of their work in an appropriate manner (perhaps a video, audio, or photographic diary, or a blog). The results of their experimentation should be stored carefully in a digital format, both for the learners' own reference and to aid evidencing of achievement. Often, teaching the use of software is best done in short sessions with new techniques reinforced with small practical projects. Lectures and discussions, and possibly speakers from within the industry, could be incorporated into the teaching programme along with visits to interactive media producers.

For the practical production of sound products leading towards learning outcome 3, learners should be advised to complete all planning material before they start. A clear plan of what they intend to produce and a bank of the resources they need should, as far as possible, be in place before production begins. This not only mirrors industry practice but will also give learners a defined path of progression and make the documentation of progress an easier task.

As previously highlighted, learning outcome 4 requires that learners demonstrate an ability to apply the audio products they have produced to an interactive media product. Learners could be carefully guided through the requirements of such a task and allowed the opportunity to practise the

skills of file conversion, basic scripting and uploading before applying them to their own products.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to use of sound in interactive media products. Learners: <ul style="list-style-type: none">• receive lectures on concepts of sound and sound recording• receive lectures and take part in discussions and demonstrations to examine how sound is used in an interactive media product• receive lectures and hold discussions to explain how sound is used to create mood and tone in an interactive media product• analyse the use and misuse of sound in interactive media products, make notes and discuss observations.
Assignment 1 – Use of Sound in Interactive Media: What You Need to Know. Learners have been asked to contribute an article to an online media ezine on the use of sound in interactive media focusing on how designers use sound to enhance a user’s interactive experience. The article must cover: <ul style="list-style-type: none">• applications• use of sound in those applications• theory of sound• sound recording• advantages and disadvantages of analogue and digital technologies for sound.
Introduction to and review of ideas generation and recording.

Topics and suggested assignments and activities

Assignment 2 – Sound for College Promotional Interactive CD .

Part 1

Working individually to a brief from the college management learners will generate ideas for the sound element of a college promotional interactive CD.

Learners will:

- consider and interpret a creative brief
- generate and record ideas
- find suitable source sounds and document their locations
- carry out pre-production planning
- consider and document the legal and ethical implications of their proposed work
- compile a comprehensive development log evidencing their creative work.

Workshop sessions on development of practical skills to create sound assets by:

- formal brief introductory lecture at commencement of sessions covering skills to be developed in session and covering:
 - audio recording software tools and equipment
 - audio editing software tools.

Assignment 2

Part 2

Learners will create sound assets as planned in Part 1 of this assignment.

Learners:

- undertake production workshop sessions following their planned ideas.

Workshop sessions on integrating audio for an interactive media product by:

- formal brief introductory lecture at commencement of sessions covering skills to be developed in session and covering:
 - editing, integrating, dubbing and synchronising sounds
 - reflective practice.

Topics and suggested assignments and activities

Assignment 2

Part 3

Learners will complete post-production work as planned in Part 1 of this assignment:

- edit, integrate, dub and synchronise sounds
- review interactive sound production work.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of learning outcome 1 could be in the form of a presentation recorded on video or through a tutor observation report. It could also take the form of a portfolio of annotated research and activities, a written report or an interactive presentation. The investigations should cover both technology issues and usage. Notes from lectures, research from the internet, books and periodicals with the learner's own annotations and comments can all contribute to the evidence.

Presentations must be recorded for the purposes of internal and external verification.

Achievement of learning outcome 2 will be evidenced by records of the learner's planning for their sound production work. This could be shown through such means as notes on the creative process, incorporation of sound in storyboards, response to producer demands, production scheduling, minutes of meetings, and proposals outlining the intended purpose of the work. Work may reference existing products in terms of similarity or difference.

Evidence for achievement of learning outcome 3 will be a finished audio product, stored separately to the integrated piece and any associated post-production documentation. This could be supplemented through individual notes and observation of software use. Documentation such as screenshots of software use and stored versions of work in progress will help to provide evidence for achievement of this learning outcome.

Evidence for achievement of learning outcome 4 will consist of a whole or part of an interactive media product with the piece produced by the learner effectively integrated within it. It should be clear that the intentions of the learner have been met and that the audio product works in an appropriate manner to the product as a whole. The sound should be fully applied to the product which should be able to run in a consumer environment such as a browser or DVD interface.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

1.1: learners will provide a description in which all aspects of the description are accurate and relevant. The uses of sound in interactive media will be covered substantially, though not necessarily absolutely completely. Learners might make statements such as, 'Sound is important in interactive products such as websites as it helps direct a site visitor to different features.' Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: ideas will be sketched out roughly and without much detail. Learners will not justify their choice of final ideas for implementation. However, they will present some verbal or visual record of their ideas and will give some indication of where the ideas came from or how they were arrived at. Documentation will be basic but sufficient to indicate intentions. In terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working.

3.1: the term 'create' is used with an implication of acting more positively, with more deliberation or intention than simply 'doing' something. Learners will have achieved something which will not fully realise what was intended, but the activity that led to it will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it. Learners meeting this criterion might have produced an audio piece which, whilst fulfilling the aims identified in their planning, is derivative or formulaic and perhaps not highly adept in its use of technology. It should, however, apply appropriate conventions and be produced to a level at which it can be played both separately and within an interactive media product.

4.1: the term 'apply' means that the learner integrates the sound assets within an interactive media product which either they have created in another unit or which has been provided by the tutor. The sound assets applied to the interactive media product must have a clear and deliberate purpose. Learners will have achieved something which will not fully realise what was intended, but the activity that led to it will have had some sense of design, or the deliberate application of some technique behind it.

2.1, 3.1 and 4.1: when engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Use of Sound in Interactive Media: What You Need to Know	Contribution to online media ezine – article on use of sound in interactive media.	<ul style="list-style-type: none"> All preparatory notes. Report document as word processed or electronic presentation.
2.1	Assignment 2 – Sound Assets for College Promotional Interactive CD Part 1	Brief from college management to create sound assets for an interactive CD to promote the college.	Development log containing: <ul style="list-style-type: none"> all ideas notes, audio storyboard, scripts sound asset specifications proposal outline planning notes.

Criteria covered	Assignment title	Scenario	Assessment method
3.1	Assignment 2 Part 2	As above.	Project portfolio containing: <ul style="list-style-type: none"> • unedited sounds • existing library sounds • recording log • all production documentation
4.1	Assignment 2 Part 3	As above.	Project portfolio containing: <ul style="list-style-type: none"> • edited sounds integrated into interactive CD • development log • personal reflective comment.

Essential resources

Centres will need appropriate hardware and software of industrial standard. Learners should also have access to relevant software manufacturers' manuals, textbooks, the internet, and a range of examples which illustrate the use of sound in interactive media products.

Learners must be provided with an interactive media product containing place holders for the insertion of their edited and sourced sound assets: either one they have created in another unit or one provided by the tutor.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Cancellaro J — *Exploring Sound Design for Interactive Media* (Delmar, 2005) 978-1401881023

Case A — *Sound FX: Unlocking the Creative Potential of Recording Studio Effects* (Focal Press, 2007) 978-0240520322

Dolby T — *Thomas Dolby's Guide to Website Sound Design* (Davis, 1997) 978-1562765477

Follansbee J — *Hands-On Guide to Streaming Media: an Introduction to Delivering On-Demand Media* (Focal Press, 2006) 978-0240808635

Huber D M — *Modern Recording Techniques* (Focal Press, 2005) 978-0240806259

Mack S — *The Streaming Media Bible* (John Wiley & Sons, 2002) 978-0764536502

Miller M — *Complete Idiot's Guide to Recording with Cubase* (Alpha Books, 2007) 978-1592574995

Millward S — *Fast Guide to Cubase SX* (PC Publishing, 2005) 978-1870775984

Riley R — *Audio Editing with Adobe Audition* (PC Publishing, 2008) 978-1906005030

Journals

Future Music

Websites

www.computermusic.co.uk — the sister site to the Future Publishing magazine title of the same name, this regularly updated site focuses on the creative and technological processes behind digital music production

www.findsounds.com — a site that links to many sound effect archives with short clips; although not a very comprehensive source of sounds, this may be useful in both researching and collating resources

Unit 38: Soundtrack Production for the Moving Image

Unit code: H/502/5699

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The unit aims to develop the skills learners need to produce moving image soundtracks through acquiring original sound, using existing audio resources and operating post-production software.

Unit introduction

Sound plays a central role in moving image productions, whether they are multi-million pound projects such as action movies and glossy heritage dramas for television, or small-scale, low-budget creations such as animations produced for the art-house circuit or websites. People working in moving image production have long been aware that the soundtrack enhances the visual image by helping to create meaning, mood and illusion and as such is an integral part of audio-visual communication with audiences.

This unit recognises the range of practices, techniques and levels of specialisation within moving image production and specifically addresses the skills required for individuals operating in a digital video production context where crew members are required to be multi-skilled. This is distinct from a more specialist approach to be found within productions with higher crewing levels.

The unit is designed to develop the skills needed for the production of soundtracks for video or film projects. It addresses a range of recording and post-production skills at a level appropriate for learners involved in such production. However, it can also provide a broad base for learners following a more specialist audio pathway.

The scope of the unit includes the study of soundtracks and the techniques used to produce them. These techniques can be identified as acquiring original sound, using existing audio resources and combining them using post-production software.

Learners will study techniques in sound recording for video and film in studio and on location with the aim of producing high-quality audio material. Those working in an aspect of the media industry which involves recording audio will need to know how to use appropriate equipment (including microphones), understand the issues around recording environments and be able to follow existing professional practices for recording music, the spoken word and effects. Learners will also address the issue of copyright law relating to published music, library music and audio effects.

The use of audio editing software is no longer the domain of the specialist and this wider usage is reflected in the unit.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand the relationships between sound and picture in moving image productions	1.1	describe the relationships between components of sound and picture with some appropriate use of subject terminology
2	Be able to record audio for moving image	2.1	produce recorded audio material for moving image with some assistance
3	Be able to devise a soundtrack for a moving image project	3.1	generate outline plans for the production of a soundtrack for a moving image project working within appropriate conventions and with some assistance
4	Be able to produce a soundtrack for a moving image project.	4.1	apply audio recording and editing techniques to produce a soundtrack for a moving image project with some assistance.

Unit content

1 Understand the relationships between sound and picture in moving image productions

Moving image: film; television; web; hand-held devices; video; animation

Audio components: studio and location; interviews; presentation; voiceover; drama dialogue; ambient sound; music; sound effects (SFX); stationary and moving sound sources; use of presence

Relationship between sound and picture: diegetic; non-diegetic; external diegetic; mood; meaning; illusion

2 Be able to record audio for moving image

Environments: studio and location sound formats; mixing live sound; acoustic interference

Equipment: selection; configuration and operation (studio, inside, outside, on location); video; digital; from single sources; from multiple sources

Microphones: selection; handling; positioning for different environments (indoor, outdoor and studio)

Connecting audio: awareness of talk-back; headphones; recognising and applying cabling connections

Monitor and control: monitoring and controlling of recording levels via peak program meters (PPMs) and volume units meters (Vus); fundamentals of decibels (dBs)

Synchronisation: timecode use; SMPTE

Content: dialogue, eg individuals, groups, crowds; music, eg solo, ensemble, vocal, instrumental; location, eg background animate, background inanimate, wildtrack; SFX

Documentation and storage: marking; storing and archiving of all types of sound recording media; logging tracks and timing; log soundtracks from video and audio rushes using time-code and control track

3 Be able to devise a soundtrack for a moving image project

Professional practice: working with a director; working to a brief; working with a studio crew; working with a location crew; meeting audience requirements in relation to issues of taste and decency

Components: dialogue; recorded music; pre-recorded music; SFX, eg pre-recorded, public domain, licensed, own; library, eg audio CD, CDRom, internet, public domain, licensed material

Planning: capabilities of the available locations; recording equipment; software; recognition of various audio formats and their compatibility; copyrights; documentation

Intellectual Property: public domain; internet downloading; licensed music and SFX; Performing Rights Society (PRS); Mechanical Copyright Protection Society (MCPS)

4 Be able to produce a soundtrack for a moving image project

Professional practice: working with a director; requirements of client; requirements of audience

Creativity: using audio track to complement the visual content of a production (speech, music, ambient sound, SFX)

Edit sound to picture: locking sound and vision (synchronisation); lip synchronising; split edits; use of timecode; adding music or background atmosphere; laying off and laying back tracks

Sound processing and enhancement: use of digital effect generators or synthesisers

Mixing and dubbing sound sources: level setting; equalisation; mixing dialogue; music and effects; using appropriate compression

Delivery

This unit requires a significant production element which should be based on a programme of training in which learners acquire the skills to make their own audio material. This should be supported and informed by a study of existing soundtracks.

Learners will benefit from an opportunity to listen to and evaluate pre-recorded sound effects. Centres might find that a valuable activity is to offer learners the chance to identify mood, tone and pace in a piece of unfamiliar music and, in the role of audience members, to link it to specific contexts or genres.

Close study of the soundtrack in a range of moving image sequences is likely to be beneficial. Here, learners can identify specific audio tracks and how they work with the images on screen. Learners at this point may also encounter the terms diegetic, non-diegetic and external diegetic sound.

Following this, learners can then work on an exercise which involves responding to a brief to record a number of sound effects under given headings. This will develop skills in the use of relevant recording equipment and techniques and also offer a chance to reflect on how sound signifies meaning to an audience.

In preparation for a production assignment, learners will need to be made familiar with the professional sequence of activity in planning, recording and processing sound for a video production. They will need also to learn about the relevant documentation and practices used in storing and logging material. The concept of a plan or design for the soundtrack of a video production could be introduced here. If they are to be able to work effectively in the industry it is essential that learners are introduced to the 'jargon' of post-production. Study of the language used in post-production studios and the roles of people working in the industry will lead to a greater understanding of the process.

Workshop sessions should cover the practical process including choice, care, position and function of various types of microphone and their connections to a recording unit. Compression, quality and time-code issues will also be significant, as will the protocols of studio and location practice.

Basic acoustics should be covered in sufficient detail for learners to identify the properties of various locations and the risk of audio interference. Learners should be given opportunities to practise planning and making exterior and interior location recordings of dialogue, effects and wild tracks. Studio recording at a basic level should also be part of the preparatory activities and this might include recording an interview, discussion or piece of music in performance.

Understanding directional cue positions in relation to SMPTE time-code locations and offset values needs to be demonstrated using actual visual footage and not just studied in theory. The emphasis is on the creation, development and final procedures leading to the production of a finished product as outlined in a brief.

At this stage, learners may well require training in the use of the audio editing application they will use in an assignment and to address not simply its functions, but also the effects of using them.

Assignment briefs can form part of a moving image project in which assessment for a number of units will be combined. Here, a learner will take responsibility for the soundtrack of a piece which is a group project in which they have an audio role at production and post-production stages. Another option would be for a learner to produce the soundtrack for an individual project (either their own or another learner's), for example an animation.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Class discussion, listening to pre-recorded examples and identifying techniques used for purposes, mood, and genre.
Tutorial: breakdown and analysis of specific sequences in film and TV productions.
Assignment 1 – Sound and Picture. Learners will complete an independent study of the relationship between sound and vision recording their findings in the form of a video diary.
Workshops and exercises: <ul style="list-style-type: none"> • use of microphones • use of audio and video recording equipment • producing and recording sound experiments.
Professional practice workshops: <ul style="list-style-type: none"> • recording dialogue on location • recording dialogue in studio.
Exercise: recording sound. Learners will record a number of specified sounds for a script using a range of equipment.

Topics and suggested assignments and activities

Professional practice post-production workshops and exercises:

- mixing
- dubbing
- working with multiple soundtracks.

Illustrated talk: intellectual property, library music, obtaining clearances.

Exercise: sound track planning and production.

Learners will devise and produce a sound track for a two minute piece of moving image footage using only naturally recorded sound.

Assignment 2 – Commission.

Learners will take a sound design and mixing role on a moving image production being made by other learners in connection with another unit. They will:

- devise the soundtrack
- record all necessary sound
- produce the final soundtrack.

As well as the final production, learners will submit a production file containing: all production planning and post-production paperwork.

Assessment

Evidence for assessment

Evidence generated for the assessment of this unit can take various forms. For the assessment of learner outcome 1, learners might describe two examples of soundtracks from existing film or TV productions either in a written piece of work with audio and graphic examples or a presentation illustrated with clips. Presentations must be recorded for the purposes of internal and external verification.

For the assessment of learner outcome 2 recordings should exemplify use of different recording and mixing equipment. Reports can be in the form of logs, portfolios or blogs, which should contain evidence of how the recordings were planned and executed. Evidence could include track sheets, pre-production planning schedules, and studio and equipment booking procedures. Reports, presentations and references to articles in trade journals might also be suitable assessment vehicles. Innovative approaches might be chosen, for example to provide content for a CD ROM or website designed for training and learning purposes.

For the assessment of learner outcome 3, learners are likely to provide plans for soundtracks as part of video productions in which they have responsibility for audio or which are the learner's individual project. For the assessment of learning outcome 4 the evidence will comprise recorded audio material along with reports describing the processes undertaken.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners at this level will be able to offer simple and straightforward but accurate accounts of the images on screen and the audio which accompanies them and to provide interpretation of themes or meanings at a basic level. These ideas will be realistic. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

2.1: the recordings made by learners will show evidence of location recording which contains a few problems with levels and interference, but is generally effective. Studio recording may demonstrate some technical problems, especially if mixed live but, throughout, a sense of purpose will be clear, even if the overall effect does not fully realise what was intended.

3.1: choice of theme is likely to be conventional and include three tracks. For example for a fictional piece in the horror genre, centres might expect plans for dialogue, some typical sound effects and use of library music of a 'scary' nature. Documentation will include timelines, recording schedules and annotated script, as well as some explanation for the choice of topic.

4.1: learners will demonstrate basic levels of skill in the handling of sound sources and in using a software application to mix and process sound. For example, levels may at times be uneven but there will be evidence of synchronization. Learners will show that they have worked towards meeting the requirements of the brief. Results may not be particularly successful, but the activity that led to it has been purposeful and the outcome has some sense of design, and the deliberate application of some technique behind it.

2.1, 3.1 and 4.1: when engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Sound and Picture	For a web site about film making for young people, learners create a video diary based on their exploration of the relationship between sound and vision.	<ul style="list-style-type: none"> All research notes. Completed video diary.
2.1 3.1 4.1	Assignment 2 – Commission	Commission from a production company to devise and construct a sound track for a production.	<ul style="list-style-type: none"> Completed production with soundtrack. All production and post-production documentation.

Essential resources

Learners must have access to audio acquisition equipment. This should include a range of location and studio microphones, with cables and connections. The ability to monitor audio input is essential, either via an audio recording deck or a video recorder with audio input levels and controls. Centres should also have the following:

- a studio facility with mixing desk or with an appropriate software application
- video editing applications with a multi-track audio facility or audio applications which can be imported into a video post-production context
- a facility with patch bay or set of connections which enables audio from a range of sources to be digitised into a learner's project with control over settings and levels
- a library of audio effects and music with a copyright status enabling it to be used in productions by learners. A library of films and TV productions which can be used to explore audio-image relationships.

Indicative resource materials

Textbooks

Bartlett B and Bartlett J — *Practical Recording Techniques* (Focal Press, 2005)

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Beauchamp R — *Designing Sound for Animation* (Focal Press, 2005)

Grant T — *Audio for Single Camera Operation* (Focal Press, 2002)

Holman T -- *Sound for Digital Video* (Focal Press, 2005)

Holman T — *Sound for Film and Television* (Focal Press, 2002)

Mellor D — *Sound Person's Guide to Video* (Focal Press, 2000)

Roberts-Breslin J — *Making Media: Foundations of Sound and Image Production* (Focal Press, 2003)

Rose J — *Producing Great Sound for Film and Video* (Focal Press, 2008)

Rumsey F and McCormick T — *Sound and Recording: An Introduction* (Focal Press, 2005)

Websites

britishfilmmagazine.com/filmmaking.html — *British Film Magazine*

www.bbc.co.uk/dna/filmnetwork/Filmmakingguide — BBC information about film making

www.emusician.com — *Electronic Musician* magazine

www.primary-film-focus.co.uk/filmpreproduction.html — information about film production techniques

www.skillset.org — information about Media industry professional practice

www.sospubs.co.uk — *Sound on Sound* magazine

www.synthzone.com — links to sites related to sound and vision

Unit 39: Stop Motion Animation Production

Unit code: L/502/5700

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The unit aims to develop learners' skills in the production of stop motion animation, using traditional frame-by-frame methods to animate 3D material such as objects, puppets, clay figures and other models.

Unit introduction

Animation has become an increasingly important media form and examples can be seen in formats as different as advertising, feature films, mobile phone content, the internet and television.

The industry includes both large and small production companies working on stop motion animation projects using a range of formats and for a variety of purposes. Animation on all scales requires people with fresh, exciting ideas for new work, whilst larger companies will also need individuals with specialist skills, such as model makers, or the evidence to prove that they can develop them.

This unit aims to extend learners' competence in all stages of the stop motion animation of models (the term 'model' being used in this unit to include the objects, puppets or figures used as character in a stop motion animation). Learners will work on design, character, setting and narrative, whilst also developing a range of production techniques. Point of view, lighting and movement, such as walking and lip synching are key issues in this unit. Stop motion animation involves developing creative ideas for character, setting and storyline which will engage the chosen audience.

As essential background, learners need to research the content and production techniques used in both historical and contemporary examples of work, and to understand such things as persistence of vision, frame rates, stop-frame techniques, model making and sets.

As they follow the unit, learners will increasingly recognise the need to keep their intended audience constantly in mind, and to take into account at all stages the role of animation as communication. To encourage this recognition their animation work will be exhibited to audiences after completion and audience responses evaluated. Learners will be encouraged to experiment with both content and technique.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the techniques and development of stop motion animation	1.1 describe the techniques and development of stop motion animation with some appropriate use of subject terminology
2 Be able to devise a stop motion animation with soundtrack	2.1 generate outline ideas for a stop motion animation with soundtrack working within appropriate conventions and with some assistance
3 Be able to produce a stop motion animation with soundtrack	3.1 produce a stop motion animation with soundtrack with some assistance
4 Be able to evaluate audience responses to own stop motion animation work.	4.1 comment on audience responses to own stop motion animation work with some appropriate use of subject terminology.

Unit content

1 Understand the techniques and development of stop motion animation

Techniques: persistence of vision; stop-frame; frame rates

Development: pioneers, eg Joseph Plateau (phenakitoscope), William Horner (zoetrope), Emile Reynaud (praxinoscope), Edward Muybridge, Edison (kinetoscope), Lumière brothers, George Pal; developers, eg Willis O'Brien, Ray Harryhausen, Jan Švankmajer; contemporary work, eg the brothers Quay, Tim Burton, Aardman Animations; genres and forms, eg TV animation, channel idents, cinema, advertising, music videos, computer games, mobile phones, websites

2 Be able to devise a stop motion animation with soundtrack

Use of possible formats: eg stop-frame techniques, time lapse photography, plasticine animation, claymation, using found objects, modelling, puppetry, combined formats

Generation of concepts: characters, subject: visualisation, awareness of technical limitations, exploiting format potential,

Generation of production ideas: storylines; sets; backgrounds; scenarios; audio

Audience: definition of audience, eg by age, by gender, by interests; taste; viewing context

Planning: drawings; storyboarding; consideration of movement; continuity; frames per second; perspective; soundtrack design; point of view; set or background; lighting: colour

3 Be able to produce a stop motion animation with soundtrack

Components of production: format; narrative; music; special effects; cuts; transitions; timing; frame numbers; dope sheets

Construction elements: character; models; props; lighting; set, eg three wall set, blue screen, location

Movement, eg walking, lip synching, expression, securing puppets to set, flying a puppet

Camera: framing; access to set; angle; movement; lighting; appropriate point of view; focus; perspective

Post-production editing: adding visual effects; compositing different elements into one shot; removing rigs

Post-production audio: soundtrack; dialogue; synchronisation; levels scanning; use of editing software; key frames

4 Be able to evaluate audience responses to own stop motion animation work

Showing work to audiences: eg local screenings, festivals, websites

Identifying criteria for feedback: genre; content; style; narrative; character; techniques; technical qualities; aesthetic qualities; creative qualities

Collecting audience responses: discussions; questionnaires; reviews; focus groups; feedback from online exhibition

Reporting findings: oral presentation; written report; action plan; review

Delivery

Teaching of this unit could begin by establishing for learners that the importance of animation has grown enormously in recent years. Even brief discussion is likely to demonstrate that much animation work is now shown through mobile phones, the internet, music video and advertising, as well as more traditionally on television and in film. Learners may well be aware of the impact of the stop motion animation produced by companies like Aardman Animations as well as a wide range of programmes aimed at children such as Red Collar's *Little Red Tractor*.

Consideration of the development of stop motion animation and the techniques used to produce it can be achieved through tutorials, lectures and screenings. Research by individual learners, especially in relation to material screened online, is another strategy likely to be productive. The outcomes of this research could be shared in the form of a screenings and presentations within a seminar session.

Visits to studios, screenings and exhibitions are also likely to provide material to support the understanding of techniques and styles of animation, its development and current position. These activities should, in turn, inform the planning and production processes used in practical work.

Contact with animators working in a range of techniques is highly desirable. Centres should aim to bring learners into contact with work produced through as wide a range of techniques as possible and so develop contacts with studios or freelance animators or individuals with specific relevant skills such as designers, model makers and storyboard artists. These professionals can provide learners with awareness of industry practice, offer insights through discussion of both professional and learner work and inform the design of assignments to ensure their relevance to industry practice. In addition, learners can obtain valuable insights through accessing material where animators discuss techniques used to make their work. Much of this exists on DVD, in books and on websites.

Whether through lectures, research or contact with professionals, it is important that learners become aware that the needs of large production companies and small companies producing a series of broadcast shorts can be quite different. Centres should ensure that learners have insight into more than one type of company and the employment opportunities it might provide. Smaller companies are likely to require multi-skilled individuals, whilst larger companies will need individuals with specialist skills such as storyboarding, or the evidence to prove that they can develop them.

Short, non-assessed projects are an effective way of developing familiarity with the functions and potential of a specific technique prior to an assignment. Learners should be encouraged to experiment within this unit and to be aware of the industry need for fresh, dynamic ideas and designs.

The generation of ideas for scenarios, characters and sets should be linked to workshops on model making and set design and construction. Design and craft skills should be developed and the physical properties of materials explored in relation to their suitability for animation. The potential and constraints associated with the movement of models and objects should be linked with an awareness of narrative and camera techniques. Learners should be encouraged to explore ideas for character and narrative structure, perhaps through a series of tutorials where ideas can be pitched at a tutor or visiting professional. Studio space where sets and models can be stored securely during production will be required.

Production management techniques will be key to learners using time and resources effectively in their animation work. This unit offers learners an opportunity to implement skills acquired elsewhere in their programme and an opportunity to develop techniques in planning, logging and scheduling.

Centres should ensure that learners are aware of methods used to gather and interpret audience responses whilst still at the design stage, both to inform the content of the piece and to devise appropriate exhibition and feedback activities. Formal lectures and tutorials are likely to be most appropriate for providing information about the various techniques of methods of recording audience response and the strengths and weaknesses of each.

Learners will need the opportunity to screen their finished work to a relevant audience. As a minimum this could involve using other members of their class as an audience and recording their responses in one of the ways identified. Fuller and more challenging for learners would be organising a public screening or contributing work to an existing event involving a wider public, including members of the target audience. Entering work in festivals or publishing it online and recording responses would be valuable, although with internet exhibition learners will need to be aware of the issues around the authenticity of respondents to online questionnaires.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Screenings (three sessions): <ul style="list-style-type: none">• principles of animation• techniques, formats and styles• range and development of stop motion animation.

Topics and suggested assignments and activities

Assignment 1 – Stop Motion Animation Past and Present.

Working for a website aimed at developing young people's interest in animation, learners produce a video blog which explores stop motion animation techniques and their development up to the present, illustrating the blog with stills from animations which have been significant in the history of stop motion animation.

Visiting speaker: animator working in a range of stop motion techniques.

DVD documentary of animators discussing techniques used to make their work.

Stop motion exercise using camera techniques to animate a given object in given set.

Workshops:

- model making
- set design and construction
- creating ideas
- constructing narrative
- planning, logging and scheduling.

Lectures and workshops:

- communicating with an audience
- identifying mode of address and audience appeal in example productions
- methods of recording audience response and the strengths and weaknesses of each.

Visit to studios, screening or exhibition.

Workshop on soundtrack production.

Assignment 2 – Treatment and Pitch.

Learners receive a brief to produce a stop-motion animation ident for a 'golden oldies' TV channel.

Learners produce:

- a treatment identifying the content and audience of the proposed animation
- drawings and designs for characters and backgrounds
- storyboards and other appropriate pre-production documentation.

Learners then pitch their proposal to a visiting professional.

Topics and suggested assignments and activities

Assignment 3 – Production.

Learners will:

- produce the ident
- meet client for feedback
- make revisions as required by client
- arrange audience screenings
- collate and analyse audience feedback
- write report.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcome 1 could be an oral presentation, a written report or a portfolio of work on techniques which have been significant in the development of stop motion animation, and on current techniques as illustrated by example of contemporary animated film such as an advertisement or a piece of animation exhibited digitally (for example from a website). The presentation could be illustrated with a screening of clips and the report or portfolio illustrated by screen grabs. Presentations must be recorded for the purposes of internal and external verification.

Evidence for the achievement of learning outcome 2 could be a treatment identifying the content of a proposed animation along with drawings and designs for characters and backgrounds, storyboards and other appropriate pre-production documentation. Learners might also do a presentation or pitch on their proposal.

For the achievement of learning outcome 3 the main evidence will be a piece of animation. This could be an advertisement, a channel ident or a short piece of narrative lasting from 15 seconds to one minute. It should be clear, in the case of group work, which learner is responsible for which elements of the concept, design and production. It should also be clear which learner has produced sets, models and props and who has animated them or lit the production. Evidence of camera operation and direction will also be required, along with soundtrack production and video post-production techniques. Learners are required to generate evidence for all grading criteria and centres may need to set assignments which require two or more pieces of animation in order for this to be possible within the context of group work. The technical skills demonstrated should show use of one of the recognised animation techniques. Resource issues may

determine the size of production groups. Individual animation pieces made by learners working on their own should provide a minimum opportunity to demonstrate evidence to satisfy all grading criteria. Two pieces would provide an opportunity for these learners to consolidate learning and further develop their skills.

Evidence for the achievement of learning outcome 4 could be a written report, an oral presentation or some form of structured audio-visual statement. Presentations should be recorded for the purposes of verification. Learners will need to screen their work in front of an audience or arrange for their work to be uploaded to a website in order for audience members to view the production and respond to it.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: the work presented will correctly identify the techniques used in the examples chosen and refer to the animation genre to which they belong, with some brief but accurate discussion of the development of animation. For example, 'When plasticine models talk, it looks more realistic than the puppet models'.

2.1: learners will provide an indication of how the proposed animation will be produced and how the style is appropriate to the content. The intended audience will be briefly described, together with possible screening plans. Drawings and designs for models and sets will be required although they may not be totally clear. Storyboards will indicate storyline, camera movement and soundtrack but may fall short of a completely detailed approach. A production schedule will also be required.

3.1: the technical quality of the finished animation will be acceptable and it will have shape and some sense of design. The activity that led to it will have been purposeful, with the deliberate application of chosen techniques.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the style of advertisement or the nature of the product being advertised. Learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it they should not be considered for a pass for this unit.

4.1: learners will be able to consider their own work after screening it to an audience although they may merely describe the feedback rather than interpreting it. They will make evaluative comments on what they have done but these comments will be assertions that are not supported by evidence or exemplification. A screening to other learners would typically be the extent of audience research at this level and learners are likely to require assistance and support in organising this. They will arrange a recorded discussion or devise, distribute and collect questionnaires in order to record audience response. A learner might note, for example, 'Most of the audience enjoyed the animation. They liked the figures I used but some people thought the set looked too much like a cardboard box.'

1.1 and 4.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Stop Motion Animation Past and Present	Produce content for a website which aims to develop young people's involvement in stop motion animation.	<ul style="list-style-type: none"> • All preparatory and research notes. • Illustrations. • Completed blog.
2.1	Assignment 2 – Treatment and Pitch	Learners have been given a brief for a channel ident for a TV broadcaster.	<ul style="list-style-type: none"> • All pre-production documentation. • Treatment. • Pitch presentation slides, handouts and notes. • Recording of presentation.

Criteria covered	Assignment title	Scenario	Assessment method
3.1 4.1	Assignment 2 – Production	As above.	<ul style="list-style-type: none"> • Finished animation. • Notes from client meeting. • Notes on audience feedback. • Completed evaluation.

Essential resources

Access to a rostrum camera, an animation table and lighting will be required, as well as camera equipment capable of frame capture and remote shutter control. Many DV cameras come with animation modes and whilst some of these are less than frame accurate, their use can be combined with existing video editing applications.

Construction space will be required to enable learners to make sets or models, as well as sufficient studio space for a number of sets to be in place over the period of an assignment.

Recording, editing and post-production facilities for sound will be required.

Libraries should have DVD resources as well as relevant and current information on animation, filming techniques and digital animation and contemporary filmmakers.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Grant J — *Masters of Animation* (Watson Guptill Publications Inc, 2001)

Lord P — *Cracking Animation: The Aardman Book of 3-D Animation* (Thames and Hudson, 2004)

McFarlane T and Beck J — *Outlaw Animation: Cutting-edge Cartoons from the Spike and Mike Festivals* (Harry N Abrams, 2003)

Noake R — *Animation: A Guide to Animated Film Techniques* (McDonald and Co, 1988)

Priebe K — *The Art of Stop-Motion Animation* (Delmar, 2006)

Shaw S — *Stop Motion: Craft Skills for Model Animation* (Focal Press, 2008)

Taylor R — *Encyclopaedia of Animation Techniques* (Focal Press, 2002)

Wiedemann J — *Animation Now!* (Taschen, 2007)

Williams R — *The Animator's Survival Kit* (Faber & Faber, 2002)

Websites

www.aardman.com — the Aardman Animations website

www.anim8ed.org.uk/resources_tech_3d.asp — the Anim8ed website

www.filmeducation.org/primary/animation/technique.html — the animation pages of Film Education

Unit 40:	Television and Video Studies
Unit code:	D/600/6675
QCF level:	3
Credit value:	10
Guided learning hours:	60

Unit aim

This unit aims to develop learners' awareness of the ownership and structure of the television and video industry, both commercial and public, the key debates that have shaped and continue to shape the industry, and how audiences use and respond to television and video productions.

Unit introduction

The television and video industry is a major media producer, and its development and influence on audiences, in terms of entertainment, education and information, has provoked much debate, both within government and amongst the public. Whilst it is possible that its influence and power as a medium of communication is beginning to be eroded by new media, it still remains a huge force in social and cultural terms, and so has tremendous political importance. Anyone who wishes to work in this industry must have a good knowledge of the way it is currently structured and how it is likely to evolve, as well as a sound understanding of the debates about such matters as who controls it and how it relates to the society and audiences which it theoretically serves.

Through this unit learners will explore how ownership and regulation affect output and access to television products, including the impact of new technologies on production, distribution and consumption.

Key issues and debates covered will include the maintenance of standards, the relationship between the public service and free market, and the question about possible effects and influences on audiences.

An analytical exploration of television and video products will enable learners to understand better how producers and broadcasters target their audiences and to make links between institution, text and audience.

This unit provides an excellent opportunity for potential television employees to understand what determines the shape of television products. The unit will give them a real insight into the constraints on production both from a regulatory point of view and in terms of audience demands.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand the structure of the television and video industry in the UK	1.1 describe the structure of the television and video industry with some use of subject terminology
2 Know about the key issues and debates that affect the television and video industry	2.1 outline accurately the key issues and debates that affect the television and video industry with some appropriate use of subject terminology
3 Be able to apply textual analysis techniques to the study of television/video products.	3.1 describe television/video products through the application of textual analysis techniques with some appropriate use of subject terminology.

Unit content

1 Understand the structure of the television and video industry in the UK

Ownership: public (incorporation, governance, accountability); commercial (license to broadcast, multinationals and conglomerates, vertical and horizontal integration, monopoly); independent producers

Income generation: free to air (license fee, advertising revenue, sponsorship); subscription; pay-per-view; non-broadcasting commercial activity, eg programme sales, video sales, publishing, spin-offs, merchandising, franchising

Systems and technologies: analogue; digital; satellite; cable; internet; on-demand; emerging technologies

Regulation: self-regulation, eg producers' guides, the watershed, advisory bodies; statutory regulation (The Broadcasting Act 1990 and 1996, Ofcom)

2 Know about the key issues and debates that affect the television and video industry

Issues and debates: taste and decency; quality and standards; the public service ethos; the free market ethos; ownership and access; regulation and the free market; ratings wars; effects of on-demand services, eg on scheduling; the effects of streaming media online, eg on censorship

Influence: effect theories, eg active, passive, hypodermic needle model, uses and gratifications theory, two step flow model, drip-drip effect; reception theory

3 Be able to apply textual analysis techniques to the study of television/video products

Forms: fiction; documentary; news; advertising; promotional; hybrid

Narrative: linear; non-linear; single strand; multi-strand; realist; anti-realist; open ended; closed; single episode; series; serial

Genre: eg soap opera, crime drama, hospital drama, life style, makeover, consumer, sitcoms, chat shows, 'reality' TV

Analytical approaches: audience profiling; audience analysis; types of readings, eg preferred, oppositional, negotiated, aberrant; signification; codes and conventions; narrative analysis

Delivery

The purpose of this unit is to enable learners to think purposefully about the television broadcasting industry, not just in terms of its structures but also in terms of its cultural and social effects. Learners will also consider the products of the industry and develop a critical approach to thinking about them.

The structure of the industry and its regulatory bodies could be the focus of a group research exercise, with each member taking on responsibility for one aspect of the research. Individuals would then write up the group findings and present them to the class.

Study of effects will explore the 'active' and 'passive' models, such as uses and gratification theory and the 'hypodermic needle' model. Learners should be encouraged to recognise the diversity of audiences, in terms of social groups and individuals. The learner's personal response to texts could be a starting point here, generating discussion and further research into audiences' use of television and video. One particularly fruitful area of research amongst the learners' peer group could be the use of television and video as against the use of new and emerging technologies such as the internet and mobile phones.

Textual analysis will inevitably mean some involvement with semiotics, but no particular semiotic methodology needs to be employed. It is the learner's understanding of the relationship between the construction of the text and the target audience that should be encouraged. Some tutors may find the structuralist approach rewarding, whilst others might prefer to follow the sender-message-receiver model, putting the emphasis not on the linear process but on the interrelationship between the three elements and their effects on each other. So, learners will investigate the types of texts produced by individual producers and how they could be affected by not only the structure of the industry but also the audience themselves. Whatever approach is adopted here, some attention should also be given to how television and video producers think about and analyse their audiences, using techniques such as audience profiling.

Whilst the unit structure implies that teaching might begin with the macro aspects of the industry, it would be equally valid to begin with the texts themselves and work 'upwards,' through the industry to the more general sociological and political issues such as effects, quality and access.

Regular screenings will enable learners to access a range of television and video products including terrestrial, satellite, analogue and digital channels. Learners should also be encouraged to view material independently.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to the television and video industry – tutor led presentations (two): <ul style="list-style-type: none">• the importance of the industry• its effect on media products. Followed by activities consolidating learner understanding.
Visit to a local television station meeting with professionals within the organisation and hearing how that organisation fits within the industry as a whole. Note taking, activities and interviews of personnel all conducted by learners and stored for reference.
Visiting practitioner – lecture from a local video producer detailing: <ul style="list-style-type: none">• work in the industry• how they generate income• regulation of their work.
Assignment 1 –Structure of the TV and Video Industry. Learners have received a brief to build a simple web page (with hyperlinks to appropriate content) providing information and debate about the television and video industry and its productions. Learners will: <ul style="list-style-type: none">• conduct research into the nature of the TV and video industry and collate their findings in a research portfolio (annotated and referenced)• create a simple website which outlines the structure of the industry based on what has been learnt in class and their own research findings.
Tutor led discussion surrounding a current controversy or debate surrounding a television or video product (with screening). Learners to draw up notes on all sides of the argument surrounding it.
Lecture on theories of audience consumption of media products. Learners to complete activities related to this which develops understanding.
Assignment 2 – Issues and Debates. Learners will add material to the website created in Assignment 1 introducing and illustrating the issues and debates surrounding the industry at present. This must include embedded video content to illustrate points.

Topics and suggested assignments and activities
Tutor led presentation on analysing content including a guided deconstruction of several products (with screenings) and introducing appropriate language and terminology.
Paired activity deconstructing a television product and producing a short presentation to give to the whole class outlining their findings.
<p>Assignment 3 – Analysing TV Programmes and Videos.</p> <p>Learners will add material to the website created in Assignment 1 analysing TV programmes or videos. This material will be illustrated with appropriate images and links to other relevant internet sites.</p> <p>Learners will:</p> <ul style="list-style-type: none"> • select appropriate examples of television or video content and conduct an analysis of them, considering audience, codes and conventions, form, genre and the products' place within the wider industry • create pages for website. <p>Learners will maintain a fully referenced research log throughout this process.</p>
Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for achievement of all outcomes in this unit can be presented in any format which enables learners to demonstrate knowledge and understanding of the unit content. Separate assignments could be set which will enable learners to produce evidence for each of the criteria or assignments could cover two, or all three criteria.

There is a range of appropriate formats that learners can use to provide evidence that meets the criteria. The extended essay could be the chosen format for some learners. However, PowerPoint presentations, structured audio or video statements, or oral presentations (recorded for verification) are all equally valid.

For some learners the viva voce type assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked the same lead questions, and that all are given equal opportunities to expand or clarify their answers. Interviews must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Vivas should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will correctly and substantially describe the structure of the major broadcasting institutions identifying, for example, the differences between the BBC and Sky, describing their main methods of funding, and noting the delivery systems employed by these institutions. They will describe correctly and substantially the regulatory framework for the industry referring to self-regulation and the role of Ofcom.

2.1: learners will correctly and substantially describe the current issues and debates within the industry but will not enter into any discussion of these debates or issues. Any comments made will be unsupported assertions such as, 'the BBC should not be allowed to benefit from the license fee when no other broadcaster gets public support like that.' Discussions about effects will likewise make pertinent and reasonably substantial but unsupported comments.

3.1: television formats, narrative structures, genres and audiences will be correctly and substantially described through generalised, but accurate, description of whole programmes or videos. However, there will be no detailed exemplification drawn from these examples. For example, a learner might note, '*EastEnders* is a soap opera. It is set in London and the stories revolve around the same groups of characters each week. The plot lines involve everyday events like family conflicts. Episodes end with a 'cliff hanger' and there is more than one story going on in each episode. It is usually scheduled at 7.30pm or 8.00pm and gets a very big audience. The audience profile is mainly C1, C2, D and E categories, with some B people. The locations and characters used are realistic and reflect a working class environment. Camera work is nearly all shot-reverse-shot and close ups.'

1.1, 2.1 and 3.1: evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Structure of the TV and Video Industry	Brief to build a simple web page providing information and debate about the television and video industry and its productions.	<ul style="list-style-type: none">• Annotated research portfolio.• Web page with links to appropriate illustrative content.
2.1	Assignment 2 – Issues and Debates	As above.	<ul style="list-style-type: none">• Annotated research portfolio.• Web page with links to appropriate illustrative content.
3.1	Assignment 3 – Analysing TV and Video Content	As above.	<ul style="list-style-type: none">• Annotated research portfolio.• Web page with links to appropriate illustrative content.

Essential resources

Learners will need independent access to video players and monitors in an appropriate viewing area. They will need access to a good video library containing copies of television productions from a range of television channels.

Learners will also need access to a library containing texts on media and television studies, magazines, newspapers, trade journals and specialist publications to gain statistical evidence relating to audience figures. Access to the internet and CD ROMs is also essential.

Indicative resource materials

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Branston G and Stafford R — *The Media Students Book* (Routledge, 2006) 978-0415371438

Burton G — *Talking Television: An Introduction to the Study of Television* (Hodder Arnold, 2000) 978-0340589649

Long P & Wall T — *Media Studies: Texts, Production and Context* (Longman, 2009) 978-1405858472

Journals

Broadcast Magazine

The Guardian (Monday media section)

Websites

www.barb.co.uk — the Broadcasters' Audience Research Board

www.bbc.co.uk/guidelines/editorialguidelines/edguide/ — BBC Editorial Guidelines online

www.bbconline.co.uk — BBC

www.bbconline.co.uk/news — BBC news

www.carlton.com — Carlton TV

www.channel4.com — Channel 4 TV

www.granada.co.uk — Granada TV

www.mediaknowall.com — a good starting point for internet research on the media

www.newscorp.com — News Corporation

www.ofcom.org.uk — the broadcasting regulator, Ofcom

www.skynews.co.uk — Sky News

www.vlv.org.uk — the Voice of the Listener and Viewer

Unit 41: Understanding the Creative Media Sector

Unit code: M/600/6681

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

This unit aims to give learners an understanding of the creative media sector. The unit covers the sector's industries and their ownership, legal and regulatory issues. Learners will also develop an understanding of employment opportunities, working conditions and how to apply for work in the media sector.

Unit introduction

The media industries are expanding on a national and global level. Recruitment to the sector has accelerated offering new professional opportunities. There are more people working in the media today than in any other employment sector. Developments over the last two decades have also taken place across the sector in response to technological changes, with a notable impact on media production, distribution and patterns of employment. Other wider developments include deregulation and the debate over the status and funding of public service broadcasting. The ongoing developments in digital media technology are creating a highly mixed and competitive environment. All these developments will affect those seeking employment in the media sector.

In this unit learners will develop an understanding of the professional practices essential to working in any of the media industries. Learners will understand that media industries are diverse and made up of many different organisational structures which operate at a local, national and global level. Learners will gain an essential understanding of employment opportunities and job roles in the sector and they will think about how they can become skilled and multi-skilled through training and professional development. They will also develop some knowledge of financial issues and ownership trends.

The unit will also enable learners to understand their professional role within a set of legal and ethical constraints. They will learn about the regulatory issues and organisations relevant to media industries, which determine both the scope and limitations for professional practice.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes		Assessment criteria	
1	Understand the structure and ownership of the media sector	1.1	describe the structure and ownership of the media sector
2	Understand ethical and legal constraints within the media sector	2.1	describe ethical and legal constraints within the media sector
3	Understand the regulation of the media sector	3.1	describe the regulation of the media sector
4	Know about employment opportunities and job roles in the media sector	4.1	describe employment opportunities and job roles in the media sector
5	Be able to prepare personal career development material.	5.1	prepare personal career development material using basic formal language.

Unit content

1 Understand the structure and ownership of the media sector

Sector: television, radio; film; interactive media; games development; publishing; advertising and marketing

Structure and ownership: private ownership; public service media; multinationals; independents; conglomerates; voluntary; cross-media; diversification; vertical and horizontal integration; share of ownership; mergers and takeovers; cross-media regulation; sources of income; product diversity; profitability of product range; performance against financial concerns; organisational objectives; licenses and franchises; competitors; customers; national and global competition and trends

2 Understand ethical and legal constraints within the media sector

Ethical: social issues and sensitivities, eg representation of gender, representation of religious beliefs, linguistic usages, accessibility; professional body codes of practice, eg BBC producers' guidelines, Worldwide Web Consortium (W3C) accessibility standards

Legal: content, interpretation and application of laws relating to media, eg Broadcasting Act 1990 (and later amendments), Official Secrets Act 1989, Obscene Publications Act 1959 (and later amendments), Films Act 1985, Video Recordings Act 1984, Race Relations Act 1976 (and later amendments), Human Rights Act 1998, Licensing Act 2003 (and later amendments); privacy law; copyright and intellectual property law; libel law

3 Understand the regulation of the media sector

Regulatory and professional bodies: eg British Board of Film Classification (BBFC), British Video Association, Film Distributors Association, Video Standards Council (VSC), Television, Radio and Telecommunications Office for Communication (Ofcom), Trading Standards Central, Trading Standards Nets, Press Complaints Commission (PCC), Advertising Standards Authority (ASA), The Mobile Entertainment Forum (MEF), The Independent Games Developers Association (IGDA), British Academy of Film and Television Arts (BAFTA), Commercial Radio Companies Association (CRCA), The International Visual Communication Association (IVCA), Worldwide Web Consortium (W3C), British Web Design and Marketing Association, British Interactive Multimedia Association (BIMA)

Regulatory issues: eg ownership; monopoly; access; consumer choice; freedom of information; censorship; taste and decency

4 Know about employment opportunities and job roles in the media sector

Employment opportunities: full-time; part-time; freelance; shift work; permanent; temporary; multiskilled; voluntary; casual; hourly paid; piecework; recruitment (careers advice, trade fairs, national press, trade press, personal contacts, networking, word of mouth, internet)

Job roles: eg creative, technical, editorial, marketing, managerial, administrative, legal, financial

Professional development: education and training, eg full-time, part-time, Level 2, Level 3, graduate; work experience; continuing professional development; sources of information, eg Sector Skills Councils, trade unions, careers services; record of employment history and skills, eg CV, references, portfolio, showreel, CD, personal website; career development, eg training on the job, continuing professional development, self-training

Professional behaviour: reliability; attendance and punctuality; commitment; efficiency; self-presentation; communication skills; contribution to team projects; time management; personal responsibility

5 Be able to prepare personal career development material

Presentation for employment: examples of work, eg portfolio, showreel, CD, MiniDisc™, personal website; curriculum vitae (CV); application letters; interviewing skills; presentation skills; self-presentation (linguistic codes, dress codes, interpersonal skills); references

Delivery

This unit is intended to give learners an overview of the key facts and issues they need to be aware of as professionals working in the media sector. Where possible it would be useful to make contact with media organisations and professionals and to encourage learners to be active in making contacts for themselves.

In addition to tutor-led sessions, lectures, discussions and whole group activities, sessions might adopt the vocational approach by allowing learners to form teams in order to carry out their learning. The focus on the team approach to the unit content would reinforce the professional context and endorse 'professional practice' from the outset in terms of consistent attendance, punctuality and team responsibility. This team approach would also create opportunities for learners to share tasks, hold meetings, set agendas and keep minutes. They could also undertake specific roles within their team and then to rotate the roles, reflecting on and recording their experience of leading meetings, and liaising with outside bodies and professionals.

In addressing learning outcome 1 learners could work on local, national and global companies within a chosen or allocated industry. A team approach could involve learners undertaking various forms of research followed by opportunities to build upon their communication and presentation skills. Learners should be encouraged to read the relevant press in order to gain an overview of current developments. These might include coverage of ownership patterns such as mergers and takeovers, media globalisation, debates on digital developments and the future funding and status of the BBC. *The Observer* has a business page which covers media developments, whilst the job advertisements in the media section of *The Guardian* on Mondays will enable learners to familiarise themselves with the skills, qualifications and experience required to enter the industry.

The content relating to learning outcomes 2 and 3 lends itself not only to individual and team research but also to role plays, with learners considering certain scenarios and situations in the work place where they must make professional judgments. Where learners are involved in practical units alongside this unit, they will have opportunities to apply these professional considerations to their production work. It is possible to cover this content by introducing examples from any sector and generating discussion around case studies. Sessions may also work around decisions learners have made in their own production activities. This is a vocationally relevant approach to understanding the legal constraints and how they impact on professional and creative development and practice, whilst at the same time developing an understanding of the ways in which regulatory bodies work in the industry.

Role plays and mock interviews could form the basis for covering the content related to learning outcomes 4 and 5 as well as learner research into employment opportunities and trends within a specific subsector of the industry. When working on learning outcome 4 learners must be encouraged to read the relevant press to keep up to date with the knowledge and skills required in a range of media sectors. This will enable them to understand that they must develop the range of skills which employers are looking for. Where centres are able to make contact with media organisations for the purpose of work experience learners will have opportunities to provide evidence for achievement of learning outcome 5 and also to update their work-based skills (which can, of course, be added to their CVs).

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities

Introduction to the unit and unit assessment.

For assessment of this unit learners will individually produce a careers guide to the media sector in CD form. The CD will have five sections:

- structure and ownership of the media sector
- ethical and legal constraints within the media sector
- regulation of the media sector
- employment opportunities and job roles in the media sector
- how to apply for a job.

Assignment 1 – Structure and Ownership of the Media Sector.

Introduction to the creative media sector.

Working in groups of three:

- learners take two industries each and research their structure and ownership
- groups meet, present and compare research of each member
- individually learners can add to research done by other group members
- individually learners gather and prepare their CD material (charts, illustrations, copy etc)
- individually learners produce CD section on structure and ownership.

Topics and suggested assignments and activities

Assignment 2 – Ethical and Legal Constraints within the Media Sector.

Introduction to ethical and legal constraints within the media sector.

Working in the same groups of three:

- learners research ethical and legal constraints relevant to their two industries
- groups meet, present and compare research of each member
- individually learners can add to research done by other group members
- individually learners gather and prepare their CD material (charts, illustrations, copy etc)
- individually learners produce CD section on structure and ownership.

Assignment 3 – Regulation of the Media Sector.

Introduction to regulation of the media sector.

Working in the same groups of three:

- learners research controversial media products produced in their two industries considering:
 - what was controversial about the products
 - who was involved in the controversies
 - what the outcomes were
- groups meet, present and compare research of each member
- individually learners can add to research done by other group members
- individually learners gather and prepare their CD material (charts, illustrations, copy etc)
- individually learners produce CD section on structure and ownership.

Assignment 4 – Employment Opportunities and Job Roles in the Media Sector.

Introduction to employment opportunities and job roles in the creative media sector.

Working in the same groups of three:

- learners research employment opportunities and job roles in their two industries
- groups meet, present and compare research of each member
- individually learners can add to research done by other group members
- individually learners gather and prepare their CD material (charts, illustrations, copy etc)
- individually learners produce CD section on structure and ownership.

Topics and suggested assignments and activities

Assignment 5 – How to Apply for a Job.

Visiting speaker – manager of a local company.

Individually learners will research jobs within their two chosen industries and prepare:

- advice on applying for a job
- job application materials consisting of:
 - examples of work (portfolio, showreel, audio materials etc as appropriate)
 - a curriculum vitae (CV)
 - examples of application letters
 - references
- learners gather and prepare their CD material on seeking employment
- learners produce CD section on seeking employment.

Assessment

Evidence for assessment

A range of assessment methods is recommended for this unit including group and teamwork as well as individual assessment. Where learners are working in pairs, groups or teams it is paramount that assignments are written very carefully to indicate to learners how individual assessments will be achieved with reference to prescribed evidence. Equally, there must be clear evidence of the work produced by individual learners for the purpose of the external verifier's visit. Any presentations done must be recorded for the purposes of internal and external verification.

Evidence of achievement of learning outcomes 1, 2, 3 and 4 may be in various written formats such as reports and reviews, as well as updated CVs and leaflets on career progression. Learners can also present their research findings in the form of diaries and articles. This would work effectively as evidence of understanding a range of media industries and their structure and ownership. There is also the opportunity to combine assessment tasks focusing on legal constraints with work on media regulation with learners submitting a series of short articles which highlight both legal and regulatory issues with reference to particular media products such as the release of a new film and its classification. Assessment through non-written evidence is also encouraged. Debates, audio or video diaries, the creation of personal web pages and directed discussion are all suitable methods. PowerPoint presentations are also useful when providing assessment evidence for any of the areas in this unit. In these instances and where centres are using oral presentations, mock interviews and role plays, the evidence must be recorded for the external verifier.

Evidence of achievement of learning outcome 5 is likely to be prepared CVs, letters of application for specific jobs, portfolios and showreels. Mock interviews can also be used.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification.

Application of assessment criteria

When applying the assessment criteria, tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not exhaustive and the examples need not specifically be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will describe the structure and ownership of the media sector accurately but in very general terms. However, the impact of ownership on production and distribution will not be considered. Learners will not, for instance, discuss whether this pattern of ownership makes global companies powerful but limits choice and diversity for the consumer. It is also expected that at this level learners will require guidance on seeking out and researching suitable media organisations. They will make some simple connections between the size and structure of the media organisation and market trends which affect it.

2.1: work on legal and ethical considerations will be brief with no link to examples of media products created by professionals or by the learners themselves. References to ethical and legal issues will be basic because learners will not have undertaken research to seek out interesting or unusual case studies.

3.1: learners will know the regulatory bodies and what they are responsible for but there will be limited evidence of how regulation and de-regulation affect media production, distribution and audience choice. Evidence will typically be over-reliant on internet research. Learners may refer to but will not elaborate on issues such as censorship and choice.

4.1: learners will carry out basic research into the range of employment opportunities and job roles. Coverage will be limited with no indication of how job roles often overlap and interconnect, or without an understanding of the increasing need to be multiskilled across the sector. In dealing with professional development learners will not show an understanding of the ways job roles evolve and develop, or of the need, therefore, to constantly update knowledge and skills. Descriptions of different opportunities for professional development will be basic and it is likely that learners may not go beyond what they have been told by their tutors or the findings presented by other learners.

5.1: learners will have prepared the most basic of personal career documents — for example, a brief CV containing information on the skills and education they have achieved, and a showreel of work to date — indicating little appreciation of matching their skills to the needs of the job and only the most elementary preparation of plans for a career in the media sector. Learners will be able to create an application letter for a specific post indicating some matching of their skills to the needs of the job. When expressing themselves formally in writing, learners' skills will be basic, typically with frequent errors of spelling and punctuation and occasional lapses in grammar and syntax.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment 1 – Structure and Ownership of the Media Sector	Learners have been commissioned by a publisher to produce a careers guide to the media sector in CD form.	<ul style="list-style-type: none"> • All research notes. • Meeting notes. • All raw illustrative material. • Drafts of copy and layouts. • Finished CD.
2.1	Assignment 2 – Ethical and Legal Constraints within the Media Sector	As above.	<ul style="list-style-type: none"> • All research notes. • Meeting notes. • All raw illustrative material. • Drafts of copy and layouts. • Finished CD.
3.1	Assignment 3 – Regulation of the Media Sector	As above.	<ul style="list-style-type: none"> • All research notes. • Meeting notes. • All raw illustrative material. • Drafts of copy and layouts. • Finished CD.

Criteria covered	Assignment title	Scenario	Assessment method
4.1	Assignment 4 – Employment Opportunities and Job Roles in the Media Sector	As above.	<ul style="list-style-type: none"> • All research notes. • Meeting notes. • All raw illustrative material. • Drafts of copy and layouts. • Finished CD.
5.1	Assignment 5 – How to Apply for a Job.	As above.	<ul style="list-style-type: none"> • All research notes. • Meeting notes. • All raw illustrative material. • Drafts of copy and layouts. • Finished CD.

Essential resources

Centres should develop their own library of resources to include, print, audio, moving image, interactive media products and computer games as appropriate to their programme.

Indicative resource materials

Textbooks

Baylis P, Freedman A, Procter N et al – *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al – *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Baylis P, Holmes P, Starkey G – *BTEC National in Media Production* (Heinemann Educational 2007) 978-0435499198

Branston G, Stafford R – *The Media Students Book* (Routledge 2006), 978-0415371438

Briggs A, Cobley P – *The Media: An Introduction* (Longman, 2002) 978-0582423466

Holt J, Perren A – *Media Industries: History, Theory, and Method* (Wiley Blackwell 2009) 978-1405163422

Nicol A, and Robertson G – *Media Law* (Penguin Books, 2008) 978-0141030210

O'Sullivan, T Dutton, Rayner B – *Studying the Media: An Introduction* (Hodder Arnold, 2003)

Sumner D, Rhoades S – *Magazines: A Complete Guide to the Industry* (Peter Lang Pub Inc, 2006) 978-0820476179

Journals

Broadcast

Campaign

The Guardian (Monday media section)

The Observer (media business section)

The Stage

Websites

www.asa.org.uk — the Advertising Standards Authority

www.bbc.co.uk/jobs/workexperience/index.shtml — a BBC website which offers advice on work experience

www.bbc.co.uk/mediacareersday.co.uk — information about the BBC careers day

www.bbfc.co.uk — the British Board of Film Classification

www.bfi.org.uk — the British Film Institute

www.bima.co.uk — the British Interactive Media Association

www.dcf.org.uk — the Digital Content Forum

www.ivca.org — the International Visual Communication Association (promotes effective business and public service communications)

www.journalism.co.uk — a website for journalists

www.nmk.co.uk — New Media Knowledge

www.nuj.co.uk — the National Union of Journalists

www.ofcom.org.uk — Ofcom the regulator of the UK's broadcasting, telecommunications and wireless communications industries

www.pact.co.uk — UK trade association representing the commercial interests of independent feature film, TV, animation and interactive media companies

www.skillset.org.uk — website of Skillset, the Sector Skills Council of the audio-visual industries

www.vlv.org.uk — the Voice of the Listener and Viewer

Unit 42: Web Animation for Interactive Media

Unit code: A/502/5661

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The aim of this unit is to develop learners' practical skills in the creation of interactive animations designed for web delivery. Learners will investigate web animations and explore digital animation methods. They will devise, plan and create an animation using vector-based animation software techniques to produce animated, interactive web content.

Unit introduction

Users of the worldwide web increasingly expect dynamic, visually engaging and media-rich content. This can be created by designers in the form of interactive vector-based animations. Animations of this type are scalable, so they can be resized easily for different screen resolutions from mobile devices to the highest resolution monitors. They are also small in file size, they can stream across the internet even at dial-up modem speeds and all internet users can download a software player that makes viewing their content possible. These characteristics make vector-based animations an enormously popular choice for vibrant web content and designing such sites is a thriving sector of digital, interactive media.

The aim of this unit is to develop learners' practical skills in the creation of interactive animation designed for web delivery.

The unit begins with investigations into web animations, enabling learners to understand the uses of animation on the web. These investigations will cover both visual and technical research. Learners are encouraged to look closely at interactive animations on the web to analyse their design and content. They will also investigate technologies associated with web animation in order to better understand how their work will run on the internet.

Planning a web animation project involves designing, storyboarding and drawing animation content. Learners following this unit will gain experience of planning a web animation project in answer to a vocationally relevant live or simulated client brief. Learners will use vector-based animation software techniques to produce animated interactive content designed for delivery on the internet and will save and export this animation in a format suitable for the web.

This unit will also develop the learners' ability to reflect critically on their own work, as they will need this professional skill in any future career.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Understand uses and principles of web animation	1.1 describe uses and principles of web animation with some appropriate use of subject terminology
2 Be able to devise web animation	2.1 generate outline ideas for web animation working within appropriate conventions and with some assistance
3 Be able to create web animation following industry practice.	3.1 create web animation following industry practice, working within appropriate conventions and with some assistance.

Unit content

1 Understand uses and principles of web animation

Uses of web animation: banner ads; animated interface elements; linear and interactive animations; promotion; instruction; information; entertainment

History of animation: hand-drawn (cel); flickbooks; animated cartoon; animation process, graphic information file format (gif); dynamic hypertext markup language (dHTML); extensible hypertext markup language (XHTML); Java applets

Animation: optical illusion of motion (persistence of vision); claymation; stop motion; computer generation (frame rate, frames, key frames, onion skinning, tweening)

Digital animation: vector animation; raster (bitmap) animation; compression (file size, download speeds); scalability; file formats, eg .fla, .swf, .gif, .mng, .svg

Web animation software: authoring, eg Flash, Swish, Amara, Director; players, eg Flash Player, Shockwave, Real Player, Quicktime

2 Be able to devise web animation

Stimulus: eg client brief, own brief, from market research

Ideas: brainstorming; mood boards; visualisation, eg sketches, storyboards; visual style; colour palettes; typography; sounds; animations; interactivity

Assets: original graphics; stock image library resources; freehand drawing

Legal and ethical considerations: copyright; ethical issues, eg confidentiality, privacy, representation (race, gender, religion, sexuality), decency, libel

Animation specification: purpose (client needs, target audience, content, publishing format); aesthetic quality (visual style, layout)

3 Be able to create web animation following industry practice

Plan: asset management (file storage and retrieval, naming conventions); workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

Workspace: panels, eg stage, timeline, menu bar, toolbar, library, colour palettes, properties, preferences, help

Basic tools: drawing, eg pencil, line, pen, brush, shapes; free transform, eg rotate, skew, distort, scale, envelope, ruler and guidelines; editing, eg lasso, eraser, undo, copy, paste, duplicate, insert, delete, aligning, grouping, ungrouping

Objects: symbols, eg instances, duplicating symbols, swapping symbols, editing, grouping

Colour tools: colour, eg colour properties, eyedropper, creating custom colours, colour swatches, stroke and fill

Text tools: text, eg editing, moving, rotating, reshaping, scrolling, creating text blocks, converting text to shapes

Manipulating objects: manipulating vector shapes; single layer vector shape interaction; transforming and grouping vector shapes

Animation: frame label; frame rate; timeline (playhead, layers, frames, frame rate, keyframes, onion skinning, markers); frame manipulation, eg copying, deleting, reversal; testing movies; frame by frame animation; tweening (shape, motion)

Assets: importing, eg raster images, vector images, sound files, video files, movie clips; resizing; bitmap to vector conversion; asset libraries

Advanced tools: scenes; guide layers; masking, eg mask layers, animated masks; timeline effects, eg blur, drop shadow, expand, explode, transform, transition; nesting movie clips

Interactivity: scripting; behaviours; actions; triggers; buttons; rollovers; playback control; preloaders

Saving and exporting for the web: saving a movie; publishing a movie; optimising; file formats; reasons for formats

Industry practice: reflect on finished product (compared with original intentions, fitness for purpose, technical qualities, aesthetic qualities); production skills (ideas generation, game design documentation, workflow and time management, technical competence, teamwork)

Delivery

This unit is intended to develop an understanding of the uses of animation in web pages. It encourages development of skills in the practical application of specialist software to build animations for the web. Learners must be made aware of the power of vector-based animation and its increasing use by animators in all areas of modern media. Interesting examples of professional work should be viewed and discussions should focus on the purpose and form of the animations. Learners should be encouraged to investigate the relevant technologies such as authoring and player software, file formats, streaming and compression.

An important foundation to any web animation project is ideas generation and planning, so time spent on this away from the computer will pay dividends. Learners must be encouraged to think about how ideas are generated and to apply techniques such as brainstorming and mood boards. Animations should be clearly devised before production, including storyboards, and any interactivity should be mapped in advance in the form of a flow diagram.

Workshops and demonstrations are recommended when teaching software applications. Learners should then be encouraged to apply these software techniques to their own assignment work. Tutors must encourage learners to follow professional practices such as monitoring and reviewing their work during production, creating a quality control process which will enable them to improve technical and creative decisions. Projects can then culminate in the learners reflecting upon their work, enabling them to assess their successes in both the production processes and the qualities of their finished products.

At this final stage learners should be encouraged to consider fitness for purpose and appropriateness to the medium, particularly in relation to when animation is not appropriate for use on the web (for example, whether or not there is value in having a 'pre-home-page' landing animation with 'skip intro' link) or when animation can reduce the functionality of the page through the use of distracting animated graphics or animated interfaces that inhibit task fulfilment.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and structure of unit assessment.
Introduction to web animation. Learners: <ul style="list-style-type: none">• receive lecture and demonstration of web animation in a range of products• receive lecture and conduct guided investigation and research into history of animation, creating an illustrated explanatory timeline• receive lecture on underlying principles covering persistence of vision and computer techniques• receive lecture on animation formats and conduct an investigation into technical demands and typical uses• conduct guided group investigation and research on authoring and player software, noting features, differences and potential uses.
Assignment 1 – Web Animation: What You Need to Know Exercise on authoring a discussion of web animation.
Introduction to and review of ideas generation and recording.
Assignment 2 – Animation for the College Website. Part 1 Learners generate ideas for web animations for the college website in response to a competition brief set by the college management. Learners will: <ul style="list-style-type: none">• consider and interpret the brief• generate and record ideas• select one idea for development• find suitable source images for chosen idea and document their locations• carry out pre-production planning• consider and document the legal and ethical implications of proposed work• compile a comprehensive development log evidencing their creative work.

Topics and suggested assignments and activities

Workshop sessions on development of practical web animation skills with formal brief introductory lecture covering skill to be developed in session.

Workshops will cover:

- workspace and basic tools
- advanced tools and objects
- animation methods within the software
- interactivity methods within the software
- publishing.

Assignment 2

Part 2

Learners create a web animation following an idea developed in Part 1 of this assignment.

Learners will:

- undertake production of their planned idea
- present work including review of own web animation work.

Unit learning and assessment review.

Assessment

Evidence for assessment

Evidence for the achievement of learning outcome 1 could be in the form of a presentation, a written report, notes on their findings or examples of web animation. The investigations should cover both design and technology issues. Notes from lectures, research from the internet, books and periodicals can all contribute to the evidence. Presentations must be recorded for the purposes of internal and external verification.

Evidence for the achievement of learning outcome 2 could be notes on the creative process, including storyboards and sketches, and the planning process, including schedules and minutes of meetings.

Evidence for the achievement of learning outcome 3 should ideally be generated in response to a given brief. Evidence could be made up of individual notes accompanied by digital documents showing work in progress and finished animation work, as well as tutor observation of software use and working practices.

Learners could test their work for content and concepts on client, peers and target audience, and test for technical functionality on the relevant platforms. Self-evaluation, in the form of notes or reports in paper or digital form, a formally written evaluation, or a presentation, should cover both the success of the production process and the qualities of the finished animation. Oral presentations should be recorded for verification purposes.

For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

Application of assessment criteria

When applying the assessment criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the unit.

To achieve the unit learners must achieve all the criteria. For each of the criteria learners must present evidence that addresses each italicized sub-heading of the content for the learning outcome.

1.1: learners will be able to describe correctly, and with substantial but not necessarily complete coverage, the key characteristics of web animation technology and usage. They will be able to accurately identify technical issues such as compression and file formats. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it. They will also be able to identify the purpose of the chosen examples, distinguishing correctly between, for example, banner ads, animated interface elements and e-learning content.

2.1: learners will be able to generate and plan a web animation project which uses some of the key characteristics of web animation in simple and conventional ways. There will be limited evidence of the development process, such as basic visualisations.

3.1: learners will have achieved a finished web animation working with basic web animation software techniques, but the outcomes will not be entirely as they intended. The work on the production will have been purposeful and the outcome will have some shape, some sense of design, or the deliberate application of some technique behind it. Following industry practice, learners will be able to consider their own work in such a way that they move beyond merely describing it. They will make evaluative comments upon what they have done but these comments will be assertions that are not supported by evidence or exemplification.

2.1 and 3.1: in terms of the aesthetic or imaginative qualities of their work, learners will not move beyond the conventional, but the conventions applied will be appropriate to the form or genre within which they are working. When engaged in practical activities, learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass for this unit.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the criteria in the assessment grid. This is for guidance only and it is recommended that centres either write their own assignments or adapt Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1	Assignment1 – Web Animation: What You Need to Know	Contribution to online media careers ezine – article on principles and uses of web animation.	<ul style="list-style-type: none"> • All preparatory notes. • Article as word processed or electronic document.
2.1	Assignment 2 – Animation for the College Website, Part 1	Brief from your college webmaster to devise web animation to enhance the college website.	Project portfolio – part A containing: <ul style="list-style-type: none"> • all ideas notes, sketches and drafts • planning documents • source image audit sheet • legal and ethical implications • project proposal.
3.1	Assignment 2 – Part 2	As above.	Project portfolio – Part B containing: <ul style="list-style-type: none"> • final web animation • all production documentation • creative development log • personal reflective comment.

Essential resources

For this unit centres will need appropriate hardware and software of industry standard. Learners should have access to relevant software manufacturers' manuals, textbooks, the internet and a range of examples of current web animation.

Indicative resource materials

Textbooks

Adobe Creative Team — *Adobe Flash CS4 Professional Classroom in a Book* (Adobe, 2008) 978-0321573827

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Student Book (Pearson, 2010) 978-1846906725

Baylis P, Freedman A, Procter N et al — *Level 3 BTEC National Creative Media Production*, Teaching Resource Pack (Pearson, 2010) 978-1846907371

Corsaro S, Parrott CJ — *Hollywood 2D Digital Animation* (Thompson Course Technology, 2004) 978-1592001705

Georgenes C — *How to Cheat in Adobe Flash CS: The Art of Design and Animation* (Focal Press, 2007) 978-0240520582

Green T and Chilcott J — *Macromedia Flash 8 Professional: Training from the Source* (Macromedia, 2005) 978-0321384034

Hart J — *Storyboarding for Film, TV and Animation* (Focal Press, 1999) 978-0240803296

Hoekman R — *Flash Out of the Box* (O'Reilly, 2004) 978-0596006914

Kerman P — *Sams Teach Yourself Macromedia Flash MX2004 in 24 Hours* (Sams, 2003) 978-0672325946

Ulrich K — *Flash CS3 Professional for Windows and Macintosh: Visual QuickStart Guide* (Peachpit Press, 2007) 978-0321502919

Ulrich K — *Macromedia Flash 8 for Windows and Macintosh: Visual QuickStart Guide* (Peachpit Press, 2006) 978-0321349637

Websites

www.adobe.com — software developers' site providing support, knowledge base and forums

www.bestflashanimationsite.com — tutorials, samples of good practice, resources

www.flashkit.com — excellent Flash tutorials and forum

www.flzone.net — tutorials from ActionScript to Web Design

Further information

Our customer service numbers are:

BTEC and NVQ	0844 576 0026
GCSE	0844 576 0027
GCE	0844 576 0025
The Diploma	0844 576 0028
DIDA and other qualifications	0844 576 0031

Calls may be recorded for training purposes.

Useful publications

Related information and publications include:

- Centre Handbook for Edexcel QCF NVQs and Competence-based Qualifications published annually
- Functional Skills publications – specifications, tutor support materials and question papers
- Regulatory arrangements for the Qualification and Credit Framework (published by Ofqual) August 2008
- the current Edexcel publications catalogue and update catalogue.

Edexcel publications concerning the Quality Assurance System and the internal and external verification of vocationally related programmes can be found on the Edexcel website and in the Edexcel publications catalogue.

NB: Some of our publications are priced. There is also a charge for postage and packing. Please check the cost when you order.

Professional development and training

Edexcel supports UK and international customers with training related to NVQ and BTEC qualifications. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building Functional Skills into your programme
- building effective and efficient quality assurance systems.

The national programme of training we offer can be viewed on our website (www.edexcel.com/training). You can request customised training through the website or by contacting one of our advisers in the Training from Edexcel team via Customer Services to discuss your training needs.

The training we provide:

- is active-ideas are developed and applied
- is designed to be supportive and thought provoking
- builds on best practice.

Our training may be suitable for those seeking evidence for their continuing professional development.

Annexe A: Progression pathways

The Edexcel qualification framework for the creative media sector

Level	General qualifications	Diplomas	BTEC full vocationally-related qualifications	BTEC specialist courses	NVQ/competence
8					
7					
6					
5			Edexcel BTEC Level 5 HND Diploma in Creative Media Production		
4			Edexcel BTEC Level 4 HNC Diploma in Creative Media Production		
3	Edexcel GCE AS in Media: Communication and Production	Edexcel Level 3 Principal Learning in Creative and Media	Edexcel BTEC Level 3 Nationals in Creative Media Production	Edexcel BTEC Level 3 Award, Certificate and Diploma in Interactive Media	
	Edexcel GCE A in Media: Communication and Production			Edexcel BTEC Level 3 Award, Certificate and Diploma in Photography	

Level	General qualifications	Diplomas	BTEC full vocationally-related qualifications	BTEC specialist courses	NVQ/competence
2		Edexcel Level 2 Principal Learning in Creative and Media	Edexcel BTEC Level 2 Firsts in Creative Media Production	Edexcel BTEC Level 2 Award, Certificate and Diploma in Interactive Media Edexcel BTEC Level 2 Award, Certificate and Diploma in Photography	
1		Edexcel Level 1 Principal Learning in Creative and Media	Edexcel BTEC Level 1 Award, Certificate and Diploma in Creative Media Production (QCF)	Edexcel BTEC Level 1 Award, Certificate and Diploma in Interactive Media Edexcel BTEC Level 1 Award, Certificate and Diploma in Photography	
Entry			Edexcel BTEC Entry Level Award in Creative Media Production (Entry 3) (QCF)		

Annexe B: Quality assurance

Key principles of quality assurance

- A centre delivering Edexcel qualifications must be a recognised centre and must have approval for qualifications or groups of qualifications that it is offering.
- The centre agrees as part of gaining recognition to abide by specific terms and conditions around the effective delivery and quality assurance of assessment; it must abide by these conditions throughout the period of delivery.
- Edexcel makes available to approved centres a range of materials and opportunities intended to exemplify the processes required for effective assessment and examples of effective standards. Approved centres must use the guidance on assessment to ensure that staff who are delivering Edexcel qualifications are applying consistent standards.
- An approved centre must follow agreed protocols for standardisation of assessors; planning, monitoring and recording of assessment processes; internal verification and recording of internal verification processes; and for dealing with special circumstances, appeals and malpractice.

The approach to quality assured assessment is made through a partnership between a recognised centre and Edexcel. Edexcel is committed to ensuring that it follows best practice and employs appropriate technology to support quality assurance process where practicable. Therefore the specific arrangements for working with centres will vary. Edexcel seeks to ensure that the quality assurance processes that it uses do not place undue bureaucratic processes on centres and works to support centres in providing robust quality assurance processes.

The learning outcomes and assessment criteria within this specification set out the standard to be achieved by each learner in order to gain the qualification. Edexcel operates a quality assurance process, which is designed to ensure that these standards are maintained by all assessors and verifiers.

For the purposes of quality assurance all individual qualifications and units are considered as a whole. Centres offering these qualifications must be committed to ensuring the quality of the units and qualifications they offer, through effective standardisation of assessors and internal verification of assessor decisions. Centre quality assurance and assessment processes are monitored by Edexcel.

The Edexcel quality assurance processes will involve:

- gaining centre recognition and qualification approval if a centre is not currently approved to offer Edexcel qualifications
- annual visits to centres by Edexcel for Quality Review and Development of overarching processes and quality standards. Quality Review and Development visits will be conducted by an Edexcel Quality Development reviewer

- annual visits by occupationally competent and qualified Edexcel Standards Verifiers for sampling of internal verification and assessor decisions for the occupational sector
- the provision of support, advice and guidance towards the achievement of National Occupational Standards.

Centres are required to declare their commitment to ensuring quality and appropriate assessment opportunities for learners that lead to valid and accurate assessment outcomes. In addition, centres will commit to undertaking defined training and online standardisation activities.

Centre certification and registration

Edexcel Standards Verifiers will provide support, advice and guidance to centres to achieve Direct Claims Status (DCS). Edexcel will maintain the integrity of Edexcel QCF NVQs through ensuring that the awarding of these qualifications is secure. Where there are quality issues identified in the delivery of programmes, Edexcel will exercise the right to:

- direct centres to take actions
- limit or suspend certification
- suspend registration.

The approach of Edexcel in such circumstances is to work with the centre to overcome the problems identified. If additional training is required, Edexcel will aim to secure the appropriate expertise to provide this.

What are the access arrangements and special considerations for these qualifications?

Centres are required to recruit learners to Edexcel qualifications with integrity.

Appropriate steps should be taken to assess each applicant's potential and a professional judgement made about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should consult Edexcel's policy on learners with particular requirements.

Edexcel's policy on access arrangements and special considerations for Edexcel qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the 1995 Disability Discrimination Act and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or competence. Please refer to *Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications* for further details. www.edexcel.com

Annexe C: Personal, learning and thinking skills

PLTS performance indicator (suggested recording sheet)

Name:	Date:				
	Level of success 1 = low, 5 = high				
Independent enquirers					
Identify questions to answer and problems to solve	1	2	3	4	5
Plan and carry out research, appreciating the consequences of decisions	1	2	3	4	5
Explore issues, events or problems from different perspectives	1	2	3	4	5
Analyse and evaluate information, judging its relevance and value	1	2	3	4	5
Consider the influence of circumstances, beliefs and feelings on decisions and events	1	2	3	4	5
Support conclusions, using reasoned arguments and evidence	1	2	3	4	5
Creative thinkers					
Generate ideas and explore possibilities	1	2	3	4	5
Ask questions to extend their thinking	1	2	3	4	5
Connect their own and others' ideas and experience in inventive ways	1	2	3	4	5
Question their own and others' assumptions	1	2	3	4	5
Try out alternatives or new solutions and follow ideas through	1	2	3	4	5
Reflective learners					
Assess themselves and others, identifying opportunities and achievements	1	2	3	4	5
Set goals with success criteria for their development and work	1	2	3	4	5
Review progress, acting on the outcomes	1	2	3	4	5
Invite feedback and deal positively with praise, setbacks and criticism	1	2	3	4	5
Evaluate experiences and learning to inform future progress	1	2	3	4	5
Communicate their learning in relevant ways for different audiences	1	2	3	4	5

Name:	Date:				
	Level of success 1 = low, 5 = high				
Team workers					
Collaborate with others to work towards common goals	1	2	3	4	5
Reach agreements, managing discussions to achieve results	1	2	3	4	5
Adapt behaviour to suit different roles and situations, including leadership roles	1	2	3	4	5
Show fairness and consideration to others	1	2	3	4	5
Take responsibility, showing confidence in themselves and their contribution	1	2	3	4	5
Provide constructive support and feedback to others	1	2	3	4	5
Self-managers					
Seek out challenges or new responsibilities and show flexibility when priorities change	1	2	3	4	5
Work towards goals, showing initiative, commitment and perseverance	1	2	3	4	5
Organise time and resources, prioritising actions	1	2	3	4	5
Anticipate, take and manage risks	1	2	3	4	5
Deal with competing pressures, including personal and work-related demands	1	2	3	4	5
Respond positively to change, seeking advice and support when needed	1	2	3	4	5
Manage their emotions, and build and maintain relationships	1	2	3	4	5
Effective participators					
Discuss issues of concern, seeking resolution where needed	1	2	3	4	5
Present a persuasive case for action	1	2	3	4	5
Propose practical ways forward, breaking these down into manageable steps	1	2	3	4	5
Identify improvements that would benefit others as well as themselves	1	2	3	4	5
Try to influence others, negotiating and balancing diverse views to reach workable solutions	1	2	3	4	5
Act as an advocate for views and beliefs that may differ from their own	1	2	3	4	5

Note to learner: The circled number represents an indication of your PLTS performance so far. **Note to assessor:** Indicate the level of success by circling the appropriate number during your feedback with the learner.

Annexe D

National Occupational Standards mapping

The grid below maps the knowledge covered in the Edexcel BTEC Level 3 Certificate in Creative Digital Media against Skillset's National Occupational Standards.

KEY

- ✓ indicates that the unit relates to the specified category of National Occupational Standards.
- # indicates that the unit could be related to the specified category of National Occupational Standards depending on the medium the learner works in when covering that unit.

The National Occupational Standards covered in the Edexcel BTEC Level 3 Certificates, Subsidiary Diplomas, Diplomas and Extended Diplomas in Creative Media Production are indicated in detail in the Links section of the individual units. Tutors are advised to consult the Standards as detailed in the units to see how they can be used in the teaching of that unit.

How to obtain National Occupational Standards

The National Occupational Standards for Creative Media Production can be obtained from:

Skillset
Focus Point
21 Caledonian Road
London N1 9GB

Telephone: +44(0)20 7713 9800
Website: www.skillset.org

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
Animation	✓						✓								#		
Broadcast Journalism															#		
Camera						✓					✓				#		
Design for the Moving Image							✓								#		✓
Directors						✓					✓				#		
Editing						✓	✓				✓				#		
Interactive Media and Computer Games	✓							✓	✓	✓				✓	#		
Lighting for Film and Television						✓					✓				#		
Multimedia and Print Journalism															#		
Photo Imaging	✓						✓								#		
Production Design															#		
Production (Film and Television)						✓					✓				#		
Publishing															#		
Radio Content Creation				✓											#		
Sound						✓					✓				#		
F and X units												✓			#		

	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22	Unit 23	Unit 24	Unit 25	Unit 26	Unit 27	Unit 28	Unit 29	Unit 30	Unit 31	Unit 32	Unit 33	Unit 34
Animation												✓		#			
Broadcast Journalism														#			
Camera					✓								✓	#			
Design for the Moving Image			✓									✓		#			
Directors													✓	#			
Editing			✓		✓								✓	#			
Interactive Media and Computer Games	✓	✓	✓		✓	✓	✓		✓					#			
Lighting for Film and Television													✓	#			
Multimedia and Print Journalism	✓													#			
Photo Imaging		✓												#	✓		
Production Design				✓										#			
Production (Film and Television)													✓	#			
Publishing														#			
Radio Content Creation														#			
Sound			✓		✓								✓	#			
F and X units														#	✓	✓	✓

	Unit 35	Unit 36	Unit 37	Unit 38	Unit 39	Unit 40	Unit 41	Unit 42
Animation					✓			
Broadcast Journalism								
Camera								
Design for the Moving Image					✓			
Directors								
Editing		✓		✓	✓			
Interactive Media and Computer Games		✓	✓					✓
Lighting for Film and Television								
Multimedia and Print Journalism	✓							
Photo Imaging								
Production Design								
Production (Film and Television)	✓							
Publishing								
Radio Content Creation	✓							
Sound		✓		✓				
F and X units								

Annexe E: Assessment requirements

Additional requirements for competence units in the Qualifications and Credit Framework (QCF)

Purpose

1. To provide QCF submitting organisations with a reference tool they must signpost in the additional information section of any unit which has an aim of assessing competence.
2. To provide awarding organisations with a set of requirements that must be used to ensure that 'competence' units are assessed and verified in accordance with the needs of employers and practitioners in the Creative Industries.
3. To reduce bureaucracy, whilst maintaining integrity and quality assurance of assessment and verification of achievement.

Definition of competence

The 'proven/demonstrated' – and individual – capacity to use know-how, skills, qualifications or knowledge in order to meet usual – and changing – occupational situations and requirements. The notion of competence may include formal qualification as well as elements such as the capacity to transfer skills and knowledge to a new occupational situation, or the capacity to innovate. The level or kind of competence may be assessed by evaluating the individual's ability to use his or her skills. Competencies can be specialised (such as the control of computerised processes), methodological (ability to think and decide, and capacity to innovate), or social (language and communication skills, and teamwork)¹.

Background

Qualifications are not used as a licence to practice in the creative media industries. However, in certain occupational areas, employers and practitioners support formal recognition of the demonstration of competence in the workplace in the interests of health and safety².

There have been relatively few occupational competence qualifications developed in the sector but those which have, have been a meaningful and valuable solution to associated employers and practitioners. Until the introduction of the QCF, such qualifications had been developed as NVQs, based entirely and explicitly on the originating suites of National Occupational Standards (NOS) and NVQ Code of Practice.

NVQs are just one way of assessing and demonstrating occupational competence. The QCF, in which all future qualifications will be developed, allows for more flexibility in terms of unit and qualification design and assessment. For those subsectors interested in moving away from NVQs, we aim to explore the development of competence units that are fit for purpose and maintain high-quality approaches to assessment and verification.

This document is targeted at the assessment at unit level, rather than qualification level. (A qualification given a purpose of demonstrating competence may consist of a mixture of units, including other knowledge and skills, as agreed with Skillset.)

All units used to demonstrate competence should be based entirely and explicitly on relevant NOS. Within each unit's additional information section, this assessment requirements document must be signposted.

Assessment requirements

1. QCF units that are used to assess competence within the QCF must be assessed and quality assured in accordance with the following requirements.
2. When QCF units are used to assess competence, awarding organisations are required to make sure their recognised assessment centres understand how learners will be assessed.
3. Awarding organisations' own assessment methodologies must meet Skillset's additional requirements.
4. Learners must complete real work activities in order to produce evidence to demonstrate they have met the QCF units (and therefore NOS) and are occupationally competent.
5. When a learner cannot complete a real work activity, simulation is allowed. Unless otherwise indicated it is a general principle that evidence from simulations should only be employed under the following circumstances:
 - a learner is required to complete a work activity that does not occur on a regular basis and therefore opportunities to complete a particular work activity do not easily arise (*eg the use of prosthetics in make-up*);
 - a learner is required to respond to a situation that rarely occurs, such as responding to an emergency situation;
 - the safety of a learner and/or resources would be put at risk (*eg during the evacuation of a studio following detection of a fire*).
6. When simulation is used, assessors must be confident that the simulation replicates the workplace to such an extent that learners will be able to fully transfer their occupational competence to the workplace and real situations.
7. Units that must not be assessed by simulation must be identified in the assessment methodologies for the qualification or family of qualifications, as agreed with Skillset.

8. Learners must be assessed by assessors who:

- are occupationally competent in the occupational areas they are assessing where they have sufficient and relevant technical/occupational competence in the unit, at or above the level of the unit being assessed and as defined by the assessment methodology for that qualification;
- must hold or be working towards a suitable assessor qualification to confirm they understand assessment and how to assess learners, unless a recognised assessment centre can demonstrate their training and development activity for assessors maps 100% to the NOS on which these qualifications are based. If this is the case, the mapping process must be agreed by the awarding organisation as providing the equivalent level of rigour as the achievement of the unit qualification;
- are fully conversant with the unit(s) against which the assessments and verification are to be undertaken.

9. All assessors must carry out assessment to the standards specified in the relevant Learning and Development NOS.

10. All assessment decisions made by a trainee assessor must be checked by a qualified assessor or an assessor recognised by an awarding organisation.

11. Trainee assessors must have a plan, which is overseen by the recognised assessment centre, to achieve the relevant assessor qualification(s) within an agreed timescale.

Quality assurance requirements

12. When a QCF unit is used to demonstrate competence, awarding organisations are required to make sure their recognised assessment centres understand how the qualification is quality assured.

13. QCF units that assess competence must be verified:

- internally by an internal verifier, who is accountable to the assessment centre;
- externally by an external verifier, who is accountable to the awarding organisation or an agent of the awarding organisation.

14. With reference to internal verification, internal verifiers must:

- hold or be working towards a suitable internal verifier qualification⁴ to confirm they understand how to internally verify assessments;
- have sufficient and relevant technical/occupational familiarity in the unit(s) being verified;
- be fully conversant with the standards and assessment criteria in the units to be assessed;
- understand the awarding organisation's quality assurance systems and requirements for this qualification.

15. Trainee internal verifiers must have a plan, which is overseen by the recognised assessment centre, to achieve the internal verifier qualification within an agreed timescale.

16. With reference to external verification, external verifiers must:

- hold or be working towards a suitable external verification qualification⁵ to confirm they understand and are able to carry out external verification;
- have no connections with the assessment centre, in order to maintain objectivity;
- have sufficient and relevant technical/occupational understanding of the unit(s) being verified;
- be fully conversant with the standards and performance criteria in the units to be assessed;
- understand the awarding organisation's quality assurance systems for this qualification.

17. Trainee external verifiers must have a plan, overseen by the awarding organisation, to achieve the external verifier qualification within an agreed timescale.

18. Awarding organisations must decide on the frequency of external monitoring activities, which must be based on the risks associated with a qualification of this type, and an assessment of the centre's performance and previous record.

19. In agreement with the appropriate SSC, awarding organisations can develop suitably constituted audit processes, when quality assurance and monitoring systems already exist in workplace assessment environments.

Equality and Diversity

20. Awarding organisations and their assessment centre staff must ensure no learner is discriminated against either directly or indirectly on the grounds of race, colour, nationality, ethnic or national origin, sex, marital status, gender reassignment, sexual orientation, social status, religious belief, political opinion, language (only in relation to the Welsh language and the legal requirements of the Welsh Language Act), disability, long-standing or debilitating disease or age.

Changes to the A and V qualifications

21. The current A1, A2, V1 and V2 qualifications expire on the 31st December 2010 and will be replaced by new qualifications for assessing and assuring the quality of assessment at levels 3 and 4. The new qualifications will sit within the new Qualifications and Credit Framework (QCF).

The *Additional requirements for competence units in the Qualifications and Credit Framework (QCF)* document is also available on the Skillset website at: www.skillset.org/requirements.

¹ QCF glossary of terms, 2009

² page 5, Skillset's SQS 2008

³ Currently an assessor could hold qualification A1 and/or qualification A2, mapped to the Learning and Development NOS (or from the past unit D32 and/or unit D33). SSCs may also identify other suitable equivalent qualifications.

⁴ Currently an internal verifier needs to hold qualification V1 (or from the past unit D34.) SSCs also identify other suitable equivalent qualifications.

⁵ Currently an external verifier needs to hold qualification V2 (or from the past unit D35.)

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