

# Unit 7: Creating Digital Video

Level: **1 and 2**

Unit type: **Optional specialist**

Guided learning hours: **30**

Assessment type: **Internal**

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## Unit introduction

Video is one of the most powerful ways to convey a message in modern society and different types of video are transmitted worldwide. These range from a documentary or news item that can change minds and encourage people to take action to a movie that will entertain, or a well-made advert that can increase product sales or raise money for a charity. Job roles which use digital video include camera operators who capture original footage, and editors who use computers to manipulate the original footage and combine it with other assets such as animations, audio and text.

In this unit you will investigate the range of applications and features of digital video products which have been created for a specific audience and purpose. You will apply some of your findings to your own digital products.

You will be given a brief to fulfil and will be introduced to the technology and techniques professionals use. You will need to think about the creative aspects of the product, as well as the technical. You will need to record original video assets and combine these with other assets, e.g. audio, as required. You will review your finished product having obtained feedback from others and evaluate possible improvements.

In particular, this unit develops skills from *Unit 1: The Online World* and the following optional specialist units: *Unit 5: Creating Digital Audio*, and *Unit 6: Creating Digital Graphics*. In addition, it supports the content of *Unit 4: Creating Digital Animation*, *Unit 8: Mobile Apps Development* and *Unit 13: Website Development*.

## Learning aims

In this unit you will:

- A understand the applications and features of digital video products
- B design a digital video product
- C create, test and review a digital video product.

## Learning aims and unit content

<b>What needs to be learnt</b>
<b>Learning aim A: Understand the applications and features of digital video products</b>
<b>Applications of digital video products</b> Applications and purpose, including: <ul style="list-style-type: none"><li>• a range of different existing digital video products/recordings (e.g. a TV news segment, a sketch for a comedy show, a section of documentary, a TV advert, a movie trailer, machinima)</li><li>• the effect (e.g. evoke emotion, educate, entertain, inform) that they have on different audiences (e.g. age, gender, interest, need).</li></ul>
<b>Features of digital video</b> Features, e.g.: <ul style="list-style-type: none"><li>• file types (.avi, .mpeg, etc.)</li><li>• file sizes</li><li>• timing and length</li><li>• quality</li><li>• codecs</li><li>• platforms and compatibility</li><li>• resolution (e.g. HD, for web)</li><li>• bit rate</li><li>• frames per second</li><li>• layers (soundtrack, narrative, etc.).</li></ul>

**What needs to be learnt****Learning aim B: Design a digital video product****Design documents**

Designs include:

- intended audience (age, gender, interests), purpose and the requirements defined in the brief
- initial design ideas
- script (e.g. what will be included in the product, dialogue, instructions, effects, stage directions)
- storyboard outlining the main panels of action showing characters, scenery, props and sounds and identifying timing, camera angles and flow
- list of ready-made digital assets (audio – speech, music and/or sound effects, graphics, and video recordings of any type). Sources for ready-made assets must be documented and referenced
- alternative design ideas
- recording schedule (e.g. the day(s) on which learners plan to record, the equipment they will need and the people who will be involved).
- logsheet (log of what scenes are recorded and their details)
- health and safety considerations of filming (e.g. trailing cables, risk of falling, slippery surfaces, sharp objects, heavy equipment and the environment where the recording will take place)

Carry out a recce (reconnaissance, an initial investigation) for the filming location(s):

- types of location, e.g.:
  - exterior
  - interior
  - stage
- considerations, e.g.:
  - indoor/outdoor
  - lighting
  - ambient sounds
  - weather
  - legalities (e.g. need to obtain permission, health and safety)
  - transport
  - security

Recruit a cast/crew:

- types of cast (e.g. lead actors, secondary actors, extras)
- job roles of crew, e.g.:
  - director
  - cinematographer (cameraman)
  - sound recordist
  - lighting technician.

**What needs to be learnt****Learning aim C: Create, test and review a digital video product****Recording original video clips**

Features of video recording equipment:

- digital video equipment: zoom, pan, placement of camera, use of tripod, camera angles, specifications of cameras (e.g. DV tape or digital storage, images sensors – e.g. CMOS/CCDs, connectivity to editing machine, cost)
- screen capture software: screen region, mouse pointer, narration.

Understand the difference between original video clips recorded onto tape and digital formats, and the saved digital format (usually .dv) and other wrapped formats (e.g. .avi, .qt), which are known as assets.

**Create a video product**

Gather ready-made video, audio and/or graphic asset(s) from other sources (e.g. internet, other media – such as CD or DVD).

Video editing software, e.g.:

- import video files and other files (e.g. music)
- editing tools and techniques, e.g.:
  - cut, copy, paste and delete clips
  - split and trim clips
  - transitions
  - text
- effects tools and techniques, e.g.:
  - filters
  - overlays
  - layering (video and audio)
  - picture in picture
- video quality tools and techniques, e.g.:
  - contrast
  - sharpen
  - saturation
  - white balance.

*continued*

**What needs to be learnt****Test the video product**

Test the video products for functionality during editing (e.g. checking that the clips' play and volume levels are appropriate, picture quality is usable, products are the correct length).

Gather feedback from others, including quality (e.g. that they only capture what is needed, the clips flow together well, timing is accurate, sound quality high – minimal or no noise, picture quality is high, and video is appropriate for audience and purpose).

Document any improvements, updating the sources table for ready-made assets.

Render the video (if required) into a suitable final size and format (e.g. .avi, .flv, .mpeg, .mov, .wmv). Understand the process of rendering and the reasons for doing it and consider technical aspects (e.g. format, file size, bandwidth, length, compression, frames per second (fps), bit rate).

**Review the video product**

Review the finished video product for:

- quality
- fitness for audience and purpose
- suitability against the original requirements
- legal and ethical constraints, e.g. copyright, eSafety and suitable content
- strengths and improvements.

## Assessment criteria

Level 1	Level 2 Pass	Level 2 Merit	Level 2 Distinction
<b>Learning aim A: Understand the applications and features of digital video products</b>			
1A.1 Identify the intended purpose and features of two different digital video products.	2A.P1 Explain the intended purpose and features of two different digital video products.	2A.M1 Review how the products are fit for purpose and their intended effect on the audience.	2A.D1 Discuss the strengths and weaknesses of one digital video product.
<b>Learning aim B: Design a digital video product</b>			
1B.2 Identify the audience and purpose for the design of a digital video product.	2B.P2 Describe the audience and purpose for the design of a digital video product.	2B.M2 Produce a detailed video design, including reasons why alternative ideas have been discarded. The design must include: <ul style="list-style-type: none"> <li>• logsheet</li> <li>• recce of filming locations.#</li> </ul>	2B.D2 Justify the final design decisions, explaining how the designs will: <ul style="list-style-type: none"> <li>• fulfil the stated purpose and requirements in the brief</li> <li>• meet the needs of the audience.#</li> </ul>
1B.3 Produce an outline design for a video product. The design must include: <ul style="list-style-type: none"> <li>• an outline script</li> <li>• an outline storyboard.</li> </ul>	2B.P3 Produce a design for a video product of at least 5 minutes duration. The design must include: <ul style="list-style-type: none"> <li>• description of requirements from the brief</li> <li>• a script</li> <li>• a storyboard</li> <li>• a cast/crew list</li> <li>• a list of any ready-made assets if used.#</li> </ul>		

Level 1	Level 2 Pass	Level 2 Merit	Level 2 Distinction
<b>Learning aim C: Create, test and review a digital video product</b>			
1C.4 Record video clips and, if required, prepare any other assets, with guidance.	2C.P4 Record video clips and, if required, additional audio clips and prepare any other assets, demonstrating awareness of purpose, with sources of assets listed.	2C.M3 Record high-quality video clips, demonstrating awareness of audience, with all sources for assets fully referenced.	
1C.5 Edit original video clips and, if required, any other assets to create a video product of at least 3 minutes' duration, and test for functionality, with guidance.	2C.P5 Edit original video clips, if required, audio clips and ready-made assets to create a video product of at least 5 minutes' duration.  Test the product for functionality and purpose, checking that it meets the original requirements, making any necessary improvements to the products.	2C.M4 Gather feedback from others about quality of the product and use it to improve the product, demonstrating awareness of audience and purpose.	2C.D3 Refine video and other assets to create a high-quality video product.

Level 1	Level 2 Pass	Level 2 Merit	Level 2 Distinction
1C.6 For the final video product, identify how the final product is suitable for the intended purpose.	2C.P6 For the final video product, explain how the final product is suitable for the intended audience and purpose.	2C.M5 Review the extent to which the final video product meets the needs of audience and the purpose, considering feedback from others and any constraints.	2C.D4 Evaluate the final video product and the initial designs and justify any changes made, making recommendations for further improvements.

\*Opportunity to assess mathematical skills

#Opportunity to assess English skills



## Teacher guidance

### Resources

The special resources required for this unit are:

- video cameras – either video recorders or screen capture software, e.g. Camtasia, Fraps or screen capture software for other material, e.g. game console footage – Hauppauge PVR (personal video recorder)
- video-editing software, e.g. Adobe Premiere (Pro or Elements), Sony Vegas, Final Cut (Express or Pro).

Learners need access to a suitable assignment brief, a cast and crew, and if required, audio equipment. Teachers should consider the maximum length of product appropriate for the brief.

### Assessment guidance

This unit is assessed internally by the centre and externally verified by Edexcel. Please read this guidance in conjunction with *Section 8 Internal assessment*.

Evidence for this unit will require learners to show they understand the features of video, and the processes involved in filming and editing digital clips. They will also need to demonstrate practical skills in designing, creating original recordings, editing, testing and reviewing a digital video product of their own, to meet a given brief that outlines requirements for the product. It is not acceptable to produce the product without using digital video editing software. Learners will need to record original video material: they cannot just use ready-made assets edited together.

To achieve all grading criteria, learners should have access to existing digital video products for investigation. They should also have access to equipment and software to allow them to produce their own video product through editing and testing video assets.

Please note that:

- it is not acceptable to use Windows Movie Maker editing software because, at the time of writing, the software does not provide the required technical functionality
- the video recording must be captured on digital cameras, either on hard drive or DAT tapes, rather than on 8 mm celluloid or similar.

### Learning aim A

Learners should investigate two existing digital video products for different purposes and consider features about the technical qualities, the content, and intended audience and purpose. Learners should be encouraged to choose their own clips, and to investigate different types of digital video products, such as a TV news segment, an outside broadcast for breakfast TV, a sketch for a comedy show, a section of documentary, a TV advert, movie trailer or training film. The two digital video products should be designed for different purposes.

**For 2A.P1:** learners should explain the purpose of the video clip and the use of features in the clip, including file type, file size, length, quality, any codecs used, resolution, frames per second and describe any use of layers.

*For level 1, as a minimum, learners should identify the purpose of video product and limited features, including file type, file size, length and quality.*

**For 2A.M1:** learners should review whether the clips are fit for purpose, and their intended effect on the audience.

**For 2A.D1:** learners should look at one digital video product in more detail and discuss the strengths and weaknesses of the product. They should discuss at least one strength and one weakness.

### Learning aim B

Learners should design their own digital video product to a given brief. The video should be at least 5 minutes long, but no longer than 10 minutes, for learners aiming to achieve a Level 2 Pass. Learners should consider health and safety constraints of filming, (e.g. trailing cables, risk of falling, slippery surfaces, sharp objects, heavy equipment and choice of location).

Centres are encouraged to use evidence from the creation of a digital video product as part of the learner's digital portfolio (*Unit 3: A Digital Portfolio*).

**For 2B.P2:** learners should describe the intended audience and purpose of the product, relating this to design ideas.

*For level 1, as a minimum, learners should identify the intended audience and purpose for the video product.*

**For 2B.P3:** learners will produce design ideas for a digital video product. Learners should describe any requirements for the product (as outlined in the brief). They should create a script and storyboard showing at least six main panels. The script should include the people involved (cast and crew), and give an overview of what will be included in the video. The storyboard should give an idea of what will happen from beginning to end, although it might not cover all aspects.

Learners should produce:

- a cast/crew list showing names of those involved, and the role they will take
- a list of any ready made-assets to be used.

The learner can use a recording schedule to plan and organise the production of their video.

*For level 1, as a minimum, learners should produce an outline design for their video product. An outline design would contain a script which may not be complete and a storyboard, which should include at least three main panels that should give an indication of what the video product will be about and what will be included.*

**For 2B.M2:** learners should produce detailed design documents, including outlines of alternative ideas and why they have discarded them, e.g. an outline of variations on the script or alternative audiences for their products. These should not be fully worked-up designs, but annotations or sketches to demonstrate the development in their design process.

Learners should give more detail in their design documents, considering purpose, intended audience and requirements given in the brief. This should include an explanation of what the learner must include in the designs to fulfil requirements, e.g. 'My target audience is x, therefore the video product needs to include ...'. The designs should be developed to include a detailed script that includes all dialogue, stage directions and instructions to cast and crew, including any equipment, e.g. camera positions. The documents should include a detailed storyboard, which includes at least 12 main panels and explains the action in detail. Information about timing and transitions between scenes should be noted, and the learner should include a logsheet to note which scenes/clips are recorded, their timing and details, and evidence of recce(s) to filming location(s). Learners can also include any prototype video and audio clip(s) in their design documents, but these should be draft versions only, and not the final versions of clips.

To meet this criterion, a learner does not need to record video at more than one filming location, but if their design requires multiple locations, then learners must complete multiple recce(s).

**For 2B.D2:** learners should justify why they chose the final design ideas from the alternative ideas outlined for the Merit criteria. Learners should explain how each asset helps meet the stated purpose and requirements in the brief, including reference to the script, storyboard, logsheet and recce report.

Learners may wish to do this by annotating their designs and describing why they have chosen an idea, e.g. 'I have used a fade transition in here because...'. They should also justify why they have chosen to combine assets in this way to fulfil the brief, and why the chosen design was selected.

### Learning aim C

Learners should prepare and carry out filming and prepare (create and gather) additional assets, such as music, graphics or sound effects. Learners should use these to create their planned digital video product. Although learners may deviate slightly from their plans (as happens with any project), they should aim to produce a final product that closely resembles their design. Any major changes should be noted on their design, with a brief reason for the change, e.g. 'had to change an actor due to illness' or 'found a different piece of music that better matched the images'.

**For 2C.P4:** learners should carry out the filming at the locations where they have done their recce(s), using the people in their cast/crew list. Learners should prepare and gather any other ready-made assets they need, such as music, sound effects or graphics. Learners should demonstrate an awareness of purpose for the product, while considering any requirements from the brief. The assets should have the sources they have used listed in a source table.

*For level 1, as a minimum, learners should have made original recordings and prepared and gathered any other assets needed, such as music. The quality of their filming and original video clips may be low and/or incomplete. Learners will need guidance to complete the recording and preparation.*

**For 2C.M3:** learners should ensure that their recordings are of a high quality, meaning that their video clips only capture what is needed, sound recording is clear and free from most noise, and the images are of a good quality. Learners should demonstrate an awareness of the audience. The bibliography of gathered sources should be detailed enough for another person to find all the specific sources used.

**For 2C.P5:** learners should edit their original video clips and gathered assets into their designed digital product. Their product should certainly be at least 5 minutes' duration, and no more than 10 minutes. Learners should also test their product for functionality, purpose, and against any requirements in the brief. Testing should include checking that the clips play, volume levels are appropriate, picture quality is usable, products are of the correct length, and the product follows the order in the storyboard. Improvements should be based on the results of testing.

If required, when learners have completed their video product, the product should be rendered and available in a suitable file type to enable review and feedback.

*For level 1, as a minimum, learners should have edited their original and ready-made clips to create a video product of least 3 minutes' duration. Learners may need guidance to create their digital video product. Learners should test their product for functionality (that the assets play and have suitable volume levels), with guidance.*

**For 2C.M4:** learners should gather feedback from at least one other person about the quality of their products. They should then respond to the feedback to improve the video, demonstrating awareness of audience and purpose.

**For 2C.D3:** teachers should be aware that the process of creating a product is iterative.

The product should be refined to a high quality, meaning it is clear, the assets flow well and are synchronised, the timing is accurate and the sound and picture quality is high. The product should be refined, using feedback from others where appropriate. Learners should ensure there are copies of both the initial and the refined versions of their video clips, with annotations on the designs where appropriate.

**For 2C.P6:** learners should explain reasons why the product is suitable for audience and purpose. Learners should give at least one reason for audience and one for purpose.

*For level 1, as a minimum, learners should identify how their product is fit for purpose, for example, 'My video is an educational video so it has short scenes and has a summary screen at the end'.*

**For 2C.M5:** learners should build on the strengths, weaknesses and explanations in the Pass criteria to review how much the product is suitable for the intended audience and purpose as defined in the designs. They should also seek feedback from at least one other person. This could be asking a peer or 'test buddy' to review their video product to suggest strengths, weaknesses and improvements (either written or recorded evidence). Alternatively, the class teacher (or a different teacher) could provide feedback. Learners should use this feedback when considering how suitable their product is. Learners must consider and explain any legal and health and safety constraints they encountered during the creation of the digital video products, for example, copyright constraints that affected the assets they used. They should consider health and safety in terms of using their equipment and filming on location. Their explanations should include typical health and safety measures, such as no trailing cables and no bare wires, and consider individual aspects relating to their filming locations.

**For 2C.D4:** learners should evaluate their final product against the initial design, identifying good and bad points, justifying why their product meets the needs of the audience, is fit for purpose and meets the brief, and justify changes made between the design and final product. They should make recommendations for at least three improvements. They do not need to act on the improvements.

## Suggested assignment outlines

The table below shows a programme of suggested assignment outlines that cover the assessment criteria. This is guidance and it is recommended that centres either write their own assignments or adapt any assignments we provide to meet local needs and resources.

Possible scenarios for this unit include:

- a TV news segment
- an outside broadcast for breakfast TV
- a sketch for a comedy show
- a section of documentary
- a TV advert
- a movie trailer
- a training film (e.g. how to use screen capture software)
- machinima.

Criteria covered	Assignment	Scenario	Assessment evidence
2A.P1, 2A.M1 2A.D1, (1A.1)	Research	<p>You work for a TV company that produces a breakfast TV programme. You've been asked to produce a new segment for the programme, providing a round-up of funny news items. Before you design a pilot segment to show the producers of the programme, you need to research existing video segments.</p> <p>Review at least three existing and different digital video products/clips and explain features about the technical qualities, content and the message/purpose.</p> <p>Match these features to the target audience and analyse the impact of the clip on the audience.</p> <p>What could be improved in the clip? What are the strengths of the clip?</p>	<ul style="list-style-type: none"> <li>• Research report or magazine articles.</li> </ul>

Criteria covered	Assignment	Scenario	Assessment evidence
2B.P2,2B.P3 2B.M2 2B.D2, (1B.2, 1B.3)	Pre-production	<p>Design a video clip based on the requirements of the brief you have been given by the producers of the programme. Explain the purpose and target audience.</p> <p>Write a complete script and storyboard, and create a recording schedule and logsheet.</p> <p>Recruit a cast/crew, and carry out a recce of filming location(s).</p> <p>Consider any alternative ideas in the design for the TV segment.</p> <p>Justify how this design entirely meets the brief from the producers.</p>	<ul style="list-style-type: none"> <li>• Design documentation, including description of purpose and audience, script, storyboard, recording schedule, logsheet, cast/crew list and recce report.</li> <li>• Prototype clips.</li> </ul>
2C.P4, 2C.M3 (1C.4)	Production and Post-production	<p>Record all original video clips and, if required, audio clips. Prepare any additional assets needed and describe any relevant constraints. Make sure you have noted any health and safety issues or legal issues for your TV segment.</p>	<ul style="list-style-type: none"> <li>• Digital files of original video clips and, if required audio clips, demonstrating range of skills used.</li> <li>• Digital files of acquired assets.</li> <li>• Documentation of health and safety issues when filming (perhaps using annotated photographs).</li> <li>• Report of legal issues.</li> </ul>
2C.P5, 2C.M4, 2C.D3, (1C.5)	Editing and Testing	<p>Edit the original video clips and assets into a digital video product. Render the finished TV segment into a suitable file format if you need to.</p> <p>Test that your clip is functional and get feedback from another person on your video. Is it fit for purpose? Is it suitable for the audience? Amend your clip to make sure it meets the original requirements in the brief.</p>	<ul style="list-style-type: none"> <li>• Completed video clip in native format.</li> <li>• Completed video clip in rendered format.</li> </ul>

Criteria covered	Assignment	Scenario	Assessment evidence
2C.P6, 2C.M5 2C.D4 (1C.6)	Review	<p>At the meeting with the producers, you will need to show that your TV segment meets the brief, the viewers will like it and you have reviewed your design.</p> <p>Obtain feedback from another person to act as the viewer. Evaluate the final product and justify why it meets the brief and suggest improvements.</p> <p>Describe legal and/or ethical constraints, and any health and safety considerations.</p> <p>Your evaluation could be used to present your thoughts and considerations to the producers in order to be asked to do another TV segment.</p>	<ul style="list-style-type: none"> <li>● Evidence of feedback, e.g. completed questionnaire.</li> <li>● Evaluation report/ presentation.</li> </ul>

