

Unit 15: Photography Media, Techniques and Technology

NQF Level 3: BTEC National

Guided learning hours: 60

Unit abstract

Photographers use a range of skills when working professionally, which will have been developed over a period of time, through learning and personal experience. A photographer's choice of materials, techniques and technologies will often provide their work with a unique identity or recognisable character. In some ways this becomes the photographer's trademark. Many of these materials, techniques and technologies have health and safety guidelines on good working practice and photographers need to be aware of these and also of any changes and updates. This knowledge allows them to minimise the potential of harming themselves and others. Professional photographers use digital photography equipment and processes extensively in studio photography and design-related work. In this unit learners may be able to explore some of the qualities of both wet-based and digital photography.

Learners will be encouraged to investigate a range of different photographic materials, media, techniques and associated technologies. Emphasis will be on practical exploration, with learners working through as wide a range of media as possible. In working directly with materials and processes learners will be able to form responses and reach conclusions about the characteristics and properties of photographic media. This will help them choose working practices that are appropriate to their intentions, and that best suit their creative interests.

Learners will be taught how to use equipment and materials safely. They will need to keep a record of all relevant health and safety guidance and to show an awareness of legislation that applies to activities in this area. In this way they will be building up a valuable store of important information. The unit also offers the opportunity for learners to explore the similarities and differences between wet-based and digital photography. They may be able to use film and digital single lens reflex (SLR) cameras to experience the similarities, such as aperture, shutter and priorities. They may also be able to experience the differences by processing and printing wet-based black and white photographic images, and comparing this with downloading digital-based imagery and using image manipulation software to produce the images.

As learners progress through the unit they will evaluate and analyse their working practice. They need to describe the properties and working characteristics of the photographic media that they have used and explored. They will review their work in terms of the visual impact of any final piece/s, use of techniques, and other relevant aspects such as adherence to health and safety guidelines. This will provide an opportunity for them to gain valuable insights into photographic media and techniques, and form conclusions about their preferences in photography.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to investigate photographic materials and processes
- 2 Be able to use photographic materials and processes safely
- 3 Understand the characteristics and properties of photographic materials
- 4 Be able to evaluate their use of photographic materials and processes.

Unit content

1 Be able to investigate photographic materials and processes

Photographic materials: eg black and white film, colour film, photographic paper, film and paper processing chemicals, light sources, spotting dyes and inks, toning chemicals, photo-finishing media, digital cameras, automatic cameras, image handling software, output devices, printers

Photographic processes: eg using 35 mm (SLR) film camera, using digital SLR camera, image manipulation, exploring different lenses, capturing movement, calculating exposures, black and white film processing, black and white printing, photo finishing, image transfer, darkroom techniques

2 Be able to use photographic materials and processes safely

Health and safety: eg apply safe working practices when using darkroom, investigate legislation in the Health and Safety at Work Act (1974), the Control of Substances Hazardous to Health (COSHH) Regulations (2002), the Provision and Use of Work Equipment Regulations (1998), Health and Safety (Display Screen Equipment) Regulations 1992, record notes and guidance of tutor demonstrations, conduct basic risk assessments

3 Understand the characteristics and properties of photographic materials

Characteristics and properties: eg film types, film speeds, variations in photographic emulsion coatings, exploring studio lighting, using available lighting, using alternative lighting equipment, flash, torches, properties of different film processing chemicals, pushing and pulling film when processing, exploring different photographic papers, resin coated, fibre-based, using different filters when printing in black and white

4 Be able to evaluate their use of photographic materials and processes

Evaluate: eg suitability of materials for specific purposes, responses to tests and experiments, different characteristics of materials, use of techniques, control of lighting, qualities of black and white film and printing, qualities of different colour films, hue, saturation, comparison between wet-based and digital-based image production, use of tools in image manipulation software, cropping, adjusting levels, contrast, visual impact, use of formal elements, line, colour, contrast, pattern, shape

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describes the level of achievement required to pass this unit.

Grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 investigate photographic materials and processes	M1 effectively investigate a diverse range of photographic materials and processes	D1 independently investigate a comprehensive range of photographic materials and processes
P2 use photographic materials and processes safely	M2 use a diverse range of photographic materials and processes safely and skilfully	D2 use a comprehensive range of photographic materials and processes safely and fluently
P3 describe the characteristics and properties of photographic materials	M3 consistently understand the characteristics and properties of a diverse range of photographic materials	D3 independently understand the characteristics and properties of a comprehensive range of photographic materials
P4 evaluate their use of photographic materials and processes.	M4 coherently evaluate their use of photographic materials and processes.	D4 independently evaluate their use of photographic materials and processes.

Essential guidance for tutors

Delivery

This unit gives learners the opportunity to explore film and digital-based photographic equipment and processes. These two areas can be studied separately or combined to allow learners to compare the qualities and characteristics of each medium. Learners should be encouraged to develop personal approaches to exploring the media and processes.

For learning outcome 1, learners should be taught how to investigate photographic materials and processes. Learners will need to use a range of skills to work with confidence. To support or reinforce this, tutors may need to demonstrate techniques and the use of equipment. The extent of any demonstrations required will depend on learners' prior knowledge. As the learning outcome is focused on investigation, tutors will need to provide as broad a range of materials, equipment and processes as are available in the centre. Learners will then be able to compare and contrast the properties of specific materials and associated techniques. Tutors will need to decide on the balance between the amount of wet-based and digital photography that they deliver. In using cameras and considering visual elements, such as composition and contrast, the two areas can be delivered as one. When learners are producing their images different processes and technologies can be applied. It may be beneficial to learners to allow them to experience both wet-based and digital image production, so they are able to consider specific qualities based on personal experience. As learners develop their work they should record their ideas and observations in their work journals or sketchbooks.

Learning outcome 2 is an integral to the delivery of learning outcome 1. As learners are exploring and investigating the properties and characteristics of photographic materials they will need to learn how to work safely. There are a number of hazards associated with wet-based photography that learners will need to be aware of. They should also record any health and safety induction notes given by tutors. They should consider the information contained in the legislation shown in the unit content. There are obvious hazards such as exposure to fumes and chemicals. There are also a number of factors that, whilst not obvious, can still be potentially hazardous, such as working in low-lit darkrooms, using lighting equipment that is hot and using extension cables. There are also hazards associated with using screens and display equipment when working digitally. Learners should present notes and relevant health and safety information for assessment.

Learning outcome 3 also links to learning outcome 1 in that it involves learners gaining knowledge and understanding from their investigative work. As they explore the materials, techniques, technology and processes they will need to record their observations and ongoing evaluations. These should show what they have learnt about the working characteristics and properties of the media and techniques, as well as show how they think they could apply them in future work. Tutors may support this outcome by holding short group critiques where learners discuss their responses, or in one-to-one tutorials where learners' progress in practical work and understanding is discussed.

For learning outcome 4, learners should evaluate their photographic experiences. This can be delivered to conclude the unit, but it may be beneficial to use a system of ongoing evaluation to support this process. Learners should record the successes and developmental areas in their work. They may consider the way they have used techniques, what skills they have learnt, what understanding they have gained about the different media and processes in photography, and any personal preferences. They should also evaluate their use of formal elements such as composition and contrast. Evidence for this outcome could be in the form of notes and observations in their sketchbooks or work journals, tutor observation of group critiques, and one-to-one tutorials.

Assessment

To achieve a **pass** grade, learners must achieve the four Pass criteria listed on the grading grid.

Work at pass level will show a suitable sense of enquiry and investigation. The range of materials and techniques considered will be appropriate.

For P1, learners will investigate photographic materials and processes. They will show a basic understanding of the properties of the different media and be able to work through a series of different techniques.

For P2, learners will use photographic materials and processes safely. They will be able to explain the hazards related to the different processes and any specific equipment. Records in sketchbooks and/or work journals will be clear and concise.

For P3, learners will understand the characteristics and properties of photographic materials. They will be able to explain what they have learnt clearly. The range of photographic materials and techniques selected will be appropriate.

For P4, learners will evaluate their use of photographic materials and processes. They will show understanding in being able to recognise the strengths and developmental areas in their work and how they developed their photographic skills.

To achieve a **merit** grade, learners must achieve all of the pass criteria plus the four merit grade criteria.

Work at this level will show an effective approach. Investigations will be carried out over a wider range of material and techniques.

For M1, learners will effectively investigate a diverse range of photographic materials and processes. The investigations will yield more effective results than in the pass grade. Learners will demonstrate consistent skills in using different photographic equipment.

For M2, learners will use a diverse range of photographic materials and processes safely and skilfully. There will be a consistent approach shown throughout the unit, and learners will be able to apply understanding gained in previous investigations to subsequent enquiries.

For M3, learners will consistently understand the characteristics and properties of a diverse range of photographic materials. Learners will record their knowledge consistently. They will form coherent conclusions about the properties of the materials.

For M4, learners will coherently evaluate their use of photographic materials and processes. There will be a consistency in the way that learners can extract information from their work and reach considered conclusions.

To achieve a **distinction** grade, learners must achieve all of the pass and merit grade criteria, plus the four distinction criteria.

Work at this level will show a greater sense of innovation and originality. Learners will be able to perform all the tasks within the assignment/s with fluency. Investigations will be comprehensive.

For D1, learners will independently investigate a comprehensive range of photographic materials and processes. Their work through the unit will be informed by knowledge gained in a direct and perceptive manner. They will be able to investigate materials fluently.

For D2, learners will use a comprehensive range of photographic materials and processes safely and fluently. Learners will be able to work with materials to discover their potential. Techniques will be fluently used and knowledge gained will inform further application of techniques and choices of materials.

For D3, learners will independently understand the characteristics and properties of a comprehensive range of photographic materials. This will be recorded in depth, and show perception in recognising and describing the properties. The responses will be clearly based on learners' own practical experiences. There will be clear links between the investigations and the conclusions reached about properties.

For D4, learners will independently evaluate their use of photographic materials and processes. They will show in depth comprehension of how they have learnt through investigating media and techniques. They will be able to identify the strengths and developmental areas of their work, perceptively.

Links to National occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit links with the core *Unit 3: Ideas and Concepts in Art and Design*. It could also be delivered as an introductory experience for a specialist unit from the photography pathway, such as *Unit 16: Darkroom Practice*, *Unit 20: Photographic Studio Techniques* or *Unit 29: Image Manipulation Computer Applications*.

There are opportunities for the development of key skills in this unit.

Essential resources

Learners will need access to specialist studios. There should be adequate space for learners to explore aspects of studio lighting at an introductory level. They should also be able to work through black and white film processing and printing in a dedicated black and white darkroom. They will also need access to computers to access some of the information on health and safety issues and legislation.

Photographic resources should include cameras, flash, tripods, studio lighting, and all relevant processing and printing equipment. Digital equipment should include cameras, access to PCs or Macs, appropriate digital image manipulation software and outputting/printing facilities.

Indicative reading for learners

Books

Berger J – *Ways of Seeing* (Penguin BBC, 1990)

Hirsch R – *Exploring Colour Photography. A complete Guide* (Laurence King, 2004)

Ingledeu J – *Photography – In the Portfolio Series* (Laurence King, 2005)

Jeffrey I – *Photography: A Concise History* (Thames, 1981)

Jeffrey I – *The Photography Book* (Phaidon, 1997)

Langford M – *Advanced Photography, 6th Edition* (Focal Press, 1998)

Langford M – *Basic Photography, 6th Edition* (Focal Press 1998)

Parr M – *Signs of the Times* (Cornerhouse, 1992)

Sontag S – *On Photography, 6th Edition* (Penguin, 1979)

Journals

British Journal of Photography (Incisive Media)

Portfolio – Portfolio Photography Workshop (Edinburgh Ltd)

Websites

www.hse.gov.uk

www.gov.uk/coshh

www.opsi.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 3 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • reviewing explorations in group scenarios • undertaking timed presentations • researching examples from practitioners, or considering technical data. 	<p>C3.1a Take part in a group discussion.</p> <p>C3.1b Make a formal presentation of at least eight minutes using an image or other support material.</p> <p>C3.2 Read and synthesise information from at least two documents about the same subject.</p> <p>Each document must be a minimum of 1000 words long.</p>
Information and communication technology Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • researching techniques and processes on the internet • reviewing and refining searches • producing supporting materials for use in presentations. 	<p>ICT3.1 Search for information, using different sources, and multiple search criteria in at least one case.</p> <p>ICT3.2 Enter and develop the information and derive new information.</p> <p>ICT3.3 Present combined information such as text with image, text with number, image with number.</p>

Improving own learning and performance Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • reviewing progress at tutorials • agreeing actions and working practices and planning production of images • evaluating their progress at key stages in the unit. 	<p>LP3.1 Set targets using information from appropriate people and plan how these will be met.</p> <p>LP3.2 Take responsibility for your learning, using your plan, to help meet targets and improve your performance.</p> <p>LP3.3 Review progress and establish evidence of your achievements.</p>