

National 5 Graphic Communication Course Support Notes



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Introduction

These support notes are not mandatory. They provide advice and guidance on approaches to delivering and assessing the National 5 Graphic Communication Course. They are intended for teachers and lecturers who are delivering the Course and its Units. They should be read in conjunction with the *Course Specification*, the *Course Assessment Specification* and the Unit Specifications for the Units in the Course.

General guidance on the Course

Aims

As stated in the *Course Specification*, the aims of the Course are to enable learners to:

- ◆ develop skills in graphic communication techniques, including the use of equipment, graphics materials and software
- ◆ extend and apply knowledge and understanding of graphic communication standards, protocols and conventions where these apply
- ◆ develop an understanding of the impact of graphic communication technologies on our environment and society

This Course will also give learners the opportunity to develop numeracy, health and wellbeing, skills in numeracy, employability, enterprise and citizenship, and thinking skills.

Progression into this Course

Entry into this Course is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- ◆ National 4 Graphic Communication

Experiences and outcomes

New National Courses have been designed to draw on and build on the curriculum experiences and outcomes as appropriate. Qualifications developed for the senior phase of secondary education are benchmarked against SCQF levels. SCQF level 4 and the curriculum level 4 are broadly equivalent in terms of level of demand although qualifications at SCQF level 4 will be more specific to allow for more specialist study of subjects.

Learners who have completed Curriculum for Excellence experiences and outcomes will also find these an appropriate basis for doing the Course.

Other experience

Learners may also have relevant skills and knowledge gained through other education systems or from their own interests and informal learning.

Skills, knowledge and understanding covered in this Course

This section provides further advice and guidance about skills, knowledge and understanding that could be included in the Course.

Note: teachers and lecturers should refer to the 'Further mandatory information on Course coverage' section in the *Course Assessment Specification for*

information about the skills, knowledge and understanding to be covered in this Course.

A broad overview of the mandatory subject skills, knowledge and understanding that will be assessed in the Course includes:

- ◆ replicating basic, familiar and some new graphic forms in 2D, 3D and pictorials
- ◆ initiating and producing simple preliminary, production and promotional graphics in straightforward, familiar and some new contexts
- ◆ initiating and producing simple informational graphics in straightforward, familiar and some new contexts
- ◆ visual literacy by interpreting simple but unfamiliar graphic communications
- ◆ spatial awareness in straightforward but unfamiliar 2D, 3D and pictorial graphic situations
- ◆ using standard graphic communication equipment, software and materials effectively for simple tasks with some complex features
- ◆ knowledge of graphic communication standards, protocols and conventions in straightforward but unfamiliar contexts
- ◆ applying design skills, including creativity, when developing solutions to simple graphics tasks with some complex features
- ◆ the ability to take initiative in evaluating work in progress and completed graphics, and applying suggestions for improvement in presentation
- ◆ knowledge of a range of computer aided graphics techniques and practice
- ◆ knowledge of colour, illustration and presentation techniques in straightforward, familiar and some unfamiliar contexts
- ◆ knowledge and understanding of the impact of graphic communication technologies on our environment and society

Progression from this Course

This Course or its components may provide progression to:

- ◆ Higher Graphic Communication Course
- ◆ other technological subjects at Higher

and, ultimately, for some, to:

- ◆ employment, apprenticeships and/or training in graphic communication-related fields
- ◆ Advanced Higher Graphic Communication Course

Hierarchies

Hierarchy is the term used to describe Courses and Units which form a structured progression involving two or more SCQF levels.

It is important that any content in a Course and/or Unit at one particular SCQF level is not repeated if a learner progresses to the next level of the hierarchy. The skills and knowledge should be able to be applied to new content and contexts to enrich the learning experience. This is for centres to manage.

This Course is designed in hierarchy with corresponding Course at SCQF levels 4 and 6 (National 4 and Higher) and has the same structure of Units with corresponding titles.

Each of the Units — *2D Graphic Communication* and *3D and Pictorial Graphic Communication* — is in hierarchy with the corresponding Unit at SCQF levels 4 and 6. The design of the Units means that teachers and lecturers in multi-level situations may be able to design learning activities that are appropriate for groups of learners working at different levels.

Teachers should also refer to the Outcomes and Assessment Standards for each level when planning delivery.

Further advice on multi-level teaching is given in the Unit Support Notes.

Approaches to learning and teaching

Planning learning and teaching should take into account personalisation and choice. With the greater availability and ease of use of graphic communication technology and software applications, centres should be assured that unless otherwise specified (eg where references are made to computer aided design) then learners and teachers may fully utilise the available technology. There are judgements to be made by the lecturer or teacher and learners as to what best supports the acquisition of knowledge and skills and the development of learning of graphic communication, principles and practice. This directly implies that references to 'sketching' and 'drawing' in any of the Units can and do encourage the use and experience of both electronic and/or manual methods. Teachers, lecturers and learners may make full use of available resources enjoying the potential they offer. In embracing the principles of Curriculum for Excellence, learners should be afforded as much flexibility, personalisation and choice in the context for learning as possible.

There are many approaches to learning, teaching and engaging with graphics for communicative purposes which may utilise a range of media and electronic technology. Part of the purpose of the Course is also to ensure that learners develop the appropriate knowledge and understanding which underpins successful graphic communication and visual literacy. Methodologies should therefore be carefully selected to enable learners to develop these.

Learning and teaching strategies

Centres should be encouraged to use an array of learning and teaching strategies to enrich the learners' experience, for example in the following ways.

Co-operative and collaborative learning approaches support, encourage, and enable all learners to achieve their full potential. These methods support a learner's thinking skills and develop confidence in working as part of a team and higher order skills such as analysis and problem solving. This may be used when setting learners with open briefs. Graphic communication lends itself to the use of active learning due to the close relationship to real-life situations in the subject content. Centres will find it of benefit to contextualise the learning experiences where appropriate. There are a number of project-based themes which support this method of learning, such as competition-based work, charity and community, enterprise and business, and environmental themes.

Problem-based learning (PBL) is another strategy which will support a learner's progress through this Course. This method may be best utilised at the end of an Outcome or a topic where additional challenge is required to ensure learners are secure in their knowledge and understanding and to develop the ability to apply knowledge and skills in less familiar contexts. The teacher sets a task which requires learners to apply their knowledge to solve a problem. For example, learners could be asked to design a logo for promotion of an international sporting event, such as the Olympic or Commonwealth Games, which will be understood by people from many competing or visiting nations. The learners must apply their knowledge of sport, athletics, games, sporting equipment, international identity, language and barriers, layout, colour, and textual information in addressing this task and presenting a solution. This could be an individual or group task. Group work approaches can be used within Units and

across Courses where it is helpful to simulate real life situations, share tasks and promote team working skills. However, there must be clear evidence for each learner to show that the learner has met the required assessment standards for the Unit or Course.

Learning through PBL develops a learner's problem solving, decision making, investigative skills, creative thinking, team working and evaluative skills and will prepare the learner for undertaking problem-based assessment activities.

Contexts for learning

Centres should develop a programme of learning which supports graphic communication in the world of work and activities which can be observed in the graphic industries. Most communities will have businesses or individuals with expertise who can contribute to the learning context, providing useful information, acknowledging the skill sets useful for success after full-time education, creating sustainable links with the centre and fostering aspirations for employment and careers.

Where appropriate, centres might enrich the learning experience with guest speakers and educational visits and trips, for example a local newspaper production office, printers, signage, engineering, construction sales office, packaging, retail outlets, etc. These will support learning through contextualisation. Links with industry and/or colleges/universities will benefit learners' understanding of graphic communication in the context of the world of work and support their future progression and inform curriculum or career pathway decisions.

Learning about Scotland and Scottish culture will enrich the learners' learning experience and help them to develop the skills for learning, life and work they will need to prepare them for taking their place in a diverse, inclusive and participative Scotland and beyond. Where there are opportunities to contextualise approaches to learning and teaching to Scottish contexts, teachers and lecturers should consider this.

Assessment

Assessment activities, used to support learning, may usefully be blended with learning activities throughout the Course. The use of assessment should be a natural part of all learning activities, continuing from the broad general education. Assessment activities should be blended with learning activities throughout the Course.

Assessment should be used naturally to support learning by:

- ◆ sharing learning intentions/success criteria
- ◆ using assessment information to set learning targets and next steps
- ◆ adapting teaching and learning activities based on assessment information
- ◆ boosting learners' confidence by providing supportive feedback

Self- and peer-assessment techniques should be encouraged wherever appropriate. In graphic communication feedback is likely to include aspects such as quality, correctness, applicability, meaning, emotions conveyed, effectiveness and relevance.

Working towards Units and Course

Learning and teaching activities should be designed to develop both:

- ◆ skills and knowledge to the standard required by **each Unit** and to the level defined by the associated Outcomes and Assessment Standards
- ◆ ability to apply the breadth of knowledge, understanding and skills required to complete the **Course assessment** successfully

Individual needs and multi-level teaching

Every group of learners can be considered to be multi-level or mixed, as each learner has individual strengths and needs.

Within a group working at National 5, there may be learners capable of achieving Higher level standards in some aspects of the Course. Where possible, they should be given the opportunity to do so. There may also be learners who are struggling to achieve National 5 level in all aspects of the Course, and may only achieve National 4 in some areas.

Teachers need to consider both the Outcomes and Assessment Standards and the extended descriptions of content for Higher when deciding this, as there are some significant differences in standards, quality, depth and content.

Where a group is formally multi-level, with some learners working towards National 4 and others towards National 5, a range of common activities with opportunities for enrichment and development may assist the teacher to plan activities, with common activities covering National 4 for all learners, and enrichment and development work for National 5 learners. This is particularly appropriate where the National 5 learners have come directly from the broad general education without doing National 4.

However, where groups working at National 5 have studied National 4 in a previous year, it is important to provide them with new and different contexts for learning to avoid repetition and potentially demotivation. For example, where a themed approach is taken, it would be useful to rotate themes bi-annually to avoid this. Where appropriate, learners might have the opportunity to contribute to deciding the theme.

Centres should consider the information in the National 4 Added Value Unit, and the *Course Assessment Specification* for any differences in content between the levels.

Learning and teaching resources

ICT is an integral part of the learning in graphic communication and should be encouraged at every opportunity. Where appropriate, centres and learners will benefit from the use of ICT and resources, such as: interactive boards, tablets, scanners and visualisers. Interactive boards can improve the learning experience when delivering new learning related to software packages (simply by making it easier to observe ideas, instruction and direction), and visualisers support the delivery of manual sketching and rendering, as well as tonal work with shadow and reflection using demonstrations and even physical items. As technology evolves, learning and teaching approaches will naturally adapt to reflect their potential. For example, where a learner has the facility and desire to demonstrate sketching using electronic devices then this should be encouraged, this represents personalisation and choice in learning. However centres should ensure that those choices will develop appropriate knowledge and understanding of principles where they apply. Electronic technology may also be used effectively in capturing the learners' journeys as they progress learning across the Course.

As well as new technology, it is likely that centres will make use of existing resources in the completion of graphics work and tasks. Such resources are still commonly used in graphic activities out of school and should not be omitted. Such resources might include drawing boards, pencils, markers, pastels, masks, inks and airbrush, vinyl, texture boards, templates, stencils, highlighting pens, compasses, light boxes, straight edges and squares.

Sequence of delivery

There is no set sequence to delivery of the Units in this Course; however, the way in which they are laid out is a logical approach which may be familiar to centres. It is likely that integration will be observed between the 2D, and the 3D and Pictorial Graphic Communication Units. The Outcomes within the Units lend themselves to an integrated approach within and across the Units. Although the Units can be delivered and assessed discretely, their integration will better support the development of transferable skills and provide a richer experience. Integrating the Units may make more effective use of time.

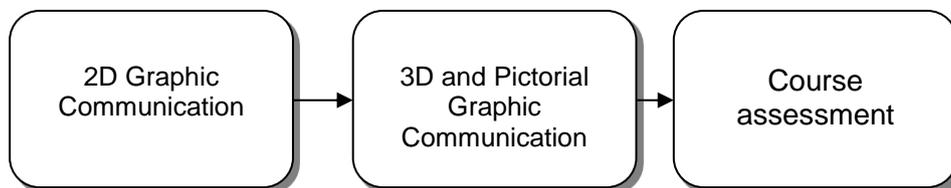
Centres should take account of individual learners' needs and plan for where support will be required. It is essential that pace and challenge be taken into account for a group and an individual. Clear and understandable plans for the Course should indicate to learners what the expectations are. Where additional support is required for a particular individual, this should be taken into account when planning. Feedback should be clear, focused and meaningful to improve learning and self-confidence. Higher order questioning and self/peer-assessment will be required to ensure learner engagement and successful completion of the Course/Unit.

Fitting the Graphic Communication assignment into a Course plan

It is essential that learners are given opportunities to prepare for the Course assessment where they are undertaking the Course. It is likely that evidence of work gathered in the Units may support and contribute to the requirements of the Graphic Communication Assignment. In addition, learners must be adequately prepared for the examination component in terms of the knowledge, understanding, rigour and pace expected. As the Graphic Communication assignment requires that learners can apply sufficient knowledge and understanding, it is logical that it may be attempted towards the end of the Course.

Possible Course structures

Sequential delivery of Units:



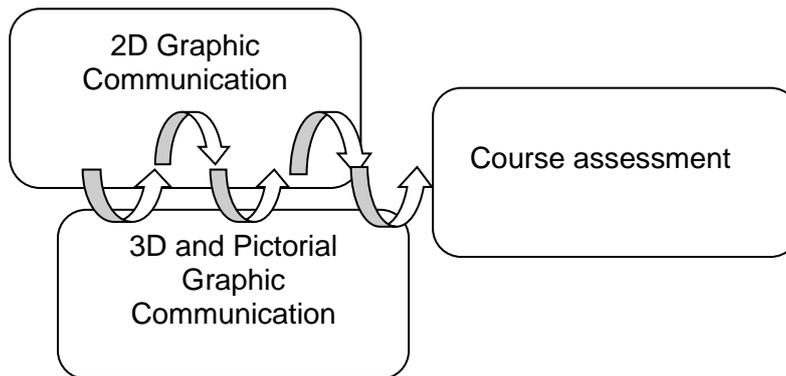
In this model, the centre has decided to take each Unit and systematically complete the work for each, finishing with the assignment. Potentially, in this case the learner is gaining a deeper understanding of each of the techniques related to each Unit. They have focused initially on developing 2D drawing and sketching¹

¹ Drawing and sketching, unless otherwise dictated by Outcome, refers to manual and/or electronic methods.

skills, 2D preliminary work and 2D promotional work before repeating much of the knowledge in a 3D format.

This gives the lecturer or teacher opportunities to gather evidence Outcome by Outcome and Unit by Unit should they desire. It is however likely that the learner could potentially fail to see the important relationships between the skills, knowledge and understanding which connects the 2D and 3D Units and it is less likely to provide a rich learning experience.

Integrating 2D and 3D and Pictorial Units



In this learning model, *2D* and *3D and Pictorial* Units are delivered in an integrated way. Here the skills, knowledge and understanding developed support the completion of the Assignment. In this case learning activities such as creating sketches and drawings in 2D would naturally be extended to their representation in 3D and pictorial — a common approach already adopted in many centres. It is likely that 2D work would initiate the learning process and thereafter loop in and out of 2D and 3D work.

In this model Appendix 2 suggests a notional integrated delivery method. It is not prescriptive.

In both cases, time must be made available for re-assessment and preparing for and completing the Course assessment.

Advice on distribution of time

The distribution of time between the various Units and components of learning within the Units is a matter for professional judgement and is entirely at the discretion the centre. Each Unit is likely to require an approximately equal time allocation, although this may depend on the learners' prior learning in the different topic areas.

Within the time allocated for the Graphic Communication Assignment, learning and teaching time will be required for:

- ◆ preparation for the assignment, which could include considering exemplar assignments and practising the application and integration of skills
- ◆ carrying out all the stages of the assignment, with teacher guidance and support

Developing skills for learning, skills for life and skills for work

Guidance on the development of skills for life, skills for learning and skills for work is to be found in the support notes for each of the component Units.

Approaches to assessment

The centre may wish to employ other assessment strategies to ensure that the learners are meeting the Assessment Standards. These will inform the learner, the centre and for the purposes of reporting. Learners should be made aware of the success criteria required to achieve the Outcomes/Unit and be involved in the process where appropriate.

Centres should be careful not to burden the learner with assessment and to plan effectively, identifying key times and natural opportunities for capturing evidence. If the Unit is being studied as part of the Course, centres may want to adopt assessment strategies appropriate to the combined Units and their related Outcomes. This will enhance learners' understanding of the common skills and consolidate the relationship between them. This structure will also reduce the assessment burden and make best use of time.

It is likely that centres will collect graphic evidence naturally as part of learning and teaching and retain the learner's evidence as proof of the standard and also to inform future learning and activities.

Centres should ensure that assessments do not restrict personalisation and choice and allow for individual approaches to achieving success in the assessment. For example, if the assessment method is not prescriptive, learners would have freedom to select the most appropriate and personalised method for demonstrating the skill or knowledge being assessed. In graphic communication activities, centres are already well versed in methods which can successfully determine learner performance and understanding. Centres must ensure learners are aware of expectations for assessments, allowing learners to respond in different ways — say, write, make, do. An assessment based on knowledge and understanding could allow learners to respond either by writing, drawing, sketching or digitally capturing their response.

Pedagogy for Design and Technology subjects leaves ample opportunity for learners and teachers to make effective and active use of ICT in learning, teaching and assessment activities. Using ICT to support the breadth of graphical work could bring an added dimension to learning in this subject area.

There are a variety of approaches to assessment:

- ◆ a combined approach whereby tasks are set which can cover Assessment Standards across both the *2D* and *3D and Pictorial* Graphic Communication Units (although some discrete Unit activities may be necessary)
- ◆ a Unit-by-Unit approach whereby tasks are set which cover only the Assessment Standards for either the *2D* or the *3D and Pictorial* Graphic Communication Units
- ◆ a portfolio approach, where collection of naturally occurring evidence is used to support the achievement of Assessment Standards — this could be gathered from structured tasks, discrete activities, themed work, etc
- ◆ a combination of approaches — assessors may mix and match according to the needs of their learners

In each case, evidence should be judged in the same way and by using the information given on making assessment judgements in SQA documentation for Unit Assessment Support contained on the secure website.

Learners could be encouraged to maintain a portfolio of learning to maintain a useful record for the learner and centres. This could be approached in a number of ways:

- ◆ keeping a verbal journal recorded into podcasting
- ◆ maintaining a blog or wiki
- ◆ using screen capture software or video evidence of their work
- ◆ digital scans or capture of manual work

Centres may wish to encourage learners to maintain an e-portfolio to allow greater opportunities for the sharing of standards and to aid with local and regional moderation and verification activities.

Appendix 2 may also suggest ways in which opportunities for combined assessment evidence can be taken.

Preparation for Course assessment

Each Course has additional time which may be used at the discretion of the teacher or lecturer to enable learners to prepare for Course assessment. This time may be used near the start of the Course and at various points throughout the Course for consolidation and support. It may also be used for preparation for Unit assessment, and towards the end of the Course, for further integration, revision and preparation and/or gathering evidence for Course assessment.

Information given in the *Course Specification* and the *Course Assessment Specification* about the assessment of added value is mandatory.

Centres are free to consider how they will prepare learners to undertake the Course assessment to ensure that they will be as successful as possible. Although this is likely to vary from centre to centre, it is likely that learners will also have opportunities presented throughout the Unit activities to consolidate and prepare. That aside, for the Course assessment, time will be required for:

- ◆ preparation for the assignment, which could include considering exemplar assignments and practising the application and integration of skills
- ◆ carrying out the stages of the assignment, with teacher guidance and support
- ◆ assessing the process and completed solution
- ◆ providing opportunities for re-assessment if required
- ◆ consolidation of learning
- ◆ development of problem solving skills
- ◆ preparation for the question paper

Combining assessment across Units

If an integrated approach to Course delivery is chosen, then there may be opportunities for combining assessment across Units.

Centres are free to combine evidence across Units in order to meet the Assessment Standards. Centres should plan their approaches to assessment logically and look for key points to gather supporting evidence at naturally occurring points in learning.

Centres may also find the combination of assessments across Units beneficial to a learner's development, as this supports the links in learning between the Units of work in graphic communication. This structure may also maximise the time for teaching and learning and avoid the potential for repetition. Parts of or whole Outcomes or Units may be partnered with other Units and assessed, where appropriate.

Appendix 2 demonstrates an integrated approach. It is logical that across the activity transition points, evidence could be gathered in a cross-Unit approach.

Equality and inclusion

Within any graphics course, there are specific activities with which individual learners may experience particular challenges; there may also be specific issues with equipment. In such cases reasonable adjustments may be appropriate for example:

- ◆ specific learners could be supported where required under the direction of the learner provided this does not affect the integrity of the qualification
- ◆ adaptive or assistive technologies should be explored as a means to facilitating greater independence

It is recognised that centres have their own duties under equality and other legislation and policy initiatives. The guidance given in these *Course Support Notes* is designed to sit alongside these duties but is specific to the delivery and assessment of the Course.

It is important that centres are aware of and understand SQA's assessment arrangements for disabled learners, and those with additional support needs, when making requests for adjustments to published assessment arrangements. Centres will find more guidance on this in the series of publications on Assessment Arrangements on SQA's website: www.sqa.org.uk/sqa/14977.html.

Appendix 1: Reference documents

The following reference documents will provide useful information and background.

- ◆ Assessment Arrangements (for disabled learners and/or those with additional support needs) — various publications are available on SQA’s website at: www.sqa.org.uk/sqa/14977.html.
- ◆ [*Building the Curriculum 4: Skills for learning, skills for life and skills for work*](#)
- ◆ [*Building the Curriculum 5: A framework for assessment*](#)
- ◆ [*Course Specifications*](#)
- ◆ [*Design Principles for National Courses*](#)
- ◆ [*Guide to Assessment \(June 2008\)*](#)
- ◆ Principles and practice papers for curriculum areas
- ◆ [*SCQF Handbook: User Guide*](#) (published 2009) and SCQF level descriptors (to be reviewed during 2011 to 2012): www.sqa.org.uk/sqa/4595.html
- ◆ [*SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work*](#)
- ◆ [*Skills for Learning, Skills for Life and Skills for Work: Using the Curriculum Tool*](#)

Appendix 2: Possible integrated delivery structure

2D Unit	Creating orthographic sketches	Producing orthographic drawings		2D promotional display work	
				Preliminary designs for promotional 2D	Producing single-page 2D displays or layouts
					Informational graphics
both	Colour theory and application			Promotional planning activities, DTP design principles, layout, terms, scenarios	
	Illustrating 2D and pictorial drawings and sketches				
	Graphic literacy development — knowledge of standards, conventions, protocol, terminology and extracting and using information				
	Graphic proficiency development — skills in sketching, drawing, applying, producing, analysing, evaluating, and planning.				
3D Unit	Creating pictorial sketches	Producing pictorial drawings	Creating rendered 3D computer aided designed models		

2D Unit		Course assessment — assignment				
both	Promotional planning activities, DTP design principles, layout, terms, scenarios		Analysing a graphic communication brief and carrying out research activities	Preliminary work for production and promotional graphics	Produce production graphics and promotional graphics	Evaluating progress and justifying choices
	Graphic literacy development — knowledge of standards, conventions, protocol, terminology and extracting and using information					
	Graphic proficiency development — skills in sketching, drawing, applying, producing, analysing, evaluating, and planning					
3D Unit	3D promotional display work					
	Preliminary designs for promotional 3D	Producing single-page 3D promotional graphic display				

Administrative information

Published: May 2015 (version 2.0)

History of changes to Course Support Notes

Version	Description of change	Authorised by	Date
1.1	Minor changes to assessment information.	Qualifications Development Manager	July 2013
2.0	'Computer aided Design/Draughting' replaced with 'Computer aided Design' throughout the document.	Qualifications Manager	May 2015

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Unit Support Notes — 2D Graphic Communication (National 5)



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Introduction

These support notes are not mandatory. They provide advice and guidance on approaches to delivering and assessing the *2D Graphic Communication* (National 5) Unit. They are intended for teachers and lecturers who are delivering this Unit. They should be read in conjunction with:

- ◆ the *Unit Specification*
- ◆ the *Course Specification*
- ◆ the *Course Assessment Specification*
- ◆ the *Course Support Notes*
- ◆ appropriate assessment support materials

General guidance on the Unit

Aims

The general aim of this Unit is to develop the learner's skills and creativity in producing and interpreting 2D graphics. It will enable the learner to initiate, develop and communicate ideas and solutions using graphic techniques, in simple and familiar contexts with some complex features. The learner's experiences should allow them to gain and apply knowledge and understanding in practice across a range of graphic contexts using a range of graphic skills.

Learners will develop skills in both manual and electronic two-dimensional graphic communication techniques. They will acquire knowledge and understanding of two-dimensional graphic terms, standards, protocols, conventions, and applied techniques which will also support computer aided design and DTP (desktop publishing). They will learn how graphic communication technologies impact on our environment and society. The Unit supports learners in developing transferable skills in creativity and problem solving in a graphic communication context.

This Unit can be delivered:

- ◆ as a stand-alone Unit
- ◆ as part of the National 5 Graphic Communication Course

This Unit is a mandatory component of the Graphic Communication (National 5) Course.

Progression into this Unit

Entry into this Unit is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- ◆ 2D Graphic Communication (National 4) Unit

Learners may also have gained relevant skills and knowledge through other education systems or from their own interests and informal learning.

Centres should satisfy themselves that the learner's prior learning will support the likelihood of success.

Skills, knowledge and understanding covered in this Unit

Information about skills, knowledge and understanding is given in the National 5 Graphic Communication *Course Support Notes*.

If the Unit is being delivered as part of the National 5 Graphic Communication Course, the teacher should refer to the 'Further mandatory information on Course coverage' section within the *Course Assessment Specification* for detailed content.

If this Unit is being delivered on a free-standing basis, teachers and lecturers are free to select the skills, knowledge, understanding and contexts which are most appropriate for delivery in their centres.

Progression from this Unit

On successful completion of this Unit, the following Units and Courses may provide appropriate progression pathways for learners:

- ◆ 2D Graphic Communication (Higher) Unit
- ◆ other technological subjects at Higher

This Unit may support a learner's access to further education or employment as part of a wider entrance portfolio.

Centres should take account of the learner's strengths and the appropriateness of this Unit for entry to other Courses or programmes of study.

Approaches to learning and teaching

The National 5 Graphic Communication Course is designed around graphic skills development partnered with a high degree of personalisation, choice and expression. This *2D Graphic Communication* Unit focuses on communicating ideas, technical, informative, and expressive information using two-dimensional graphic designs and responses. During the Unit, learners will be working and learning in a range of graphic formats and contexts. Centres should plan thoroughly to ensure that the experience is a connected one rather than a 'bit-piece' approach.

Information with regard to knowledge and skills can be found in the 'Further mandatory information on Course coverage' section of the *Course Assessment Specification* which will provide a useful guide to centres as to what content must be covered. Most centres will be very familiar with the content described and are likely to have existing resources which can be used for teaching. While many of these resources will be in paper format, centres might consider how they might be utilised or adapted using electronic methods where a learner's preference dictates. For example, where the learner is demonstrating knowledge rather than process, alternative methods may be able to reveal evidence of learning — view identification, errors, omissions or standards and conventions might not always require a paper-based resource or activity. Where process-based or skill demonstration is required, the centre may wish to consider a mixture of response techniques including manual and/or electronic. The purpose is to introduce greater flexibility in learning and teaching and personalisation and choice but without loss of rigour. In both cases, electronic or manual, centres must ensure that where fundamental knowledge and principles are being developed, the methodology that best supports effective learning is used.

Spatial awareness, cognition and reasoning can be approached in a number of ways which support the activity of graphic communication. Holding, rotating, disassembling, re-assembling, folding, photographing, predicting, formal drawing, and sketching are all useful techniques to build learners' capacity and understanding.

2D orthographic drawing²: learners should experience more than a single approach to creating two-dimensional drawings. The principles of orthographic projection can be learned in a multitude of ways utilising a variety of learning and teaching resources and methodologies. Graphical literacy and proficiency can be developed by using computers, tablets, digital pens, sketching, board work, paper and pencil, graphic instruments and equipment, block work, plotting and drawing. It is anticipated that when the principles of projection and spatial awareness are sufficient, the learner will learn to integrate these methods and personalise learning to match their own preferences.

Sketching³: the development of skills in sketching will support many aspects of the Unit and subsequently the Course. It is a quick and effective means of

² Drawing, unless otherwise dictated by Outcome, refers to manual and/or electronic methods.

³ Sketching, unless otherwise dictated by Outcome, refers to manual and/or electronic methods.

recording, developing and communicating ideas graphically. As a problem solving and creative tool, analytical and developmental sketching skills are important. Where possible, sketching should be tackled freehand and some of the orthographic projection principles should be incorporated into free sketching work. The emphasis would be on using construction techniques and in establishing good proportion and line quality. Sketching may involve the use of digital materials, applications, and devices as well as pencils, pens, templates or guides in completing the sketch. Learners should be aware of the options available. Learners may wish to maintain a sketch book which records information and techniques for practice and reference. Teachers and lecturers should ensure that the content of the sketch book is accurate and where applicable adheres to recognised convention.

Graphic design skills in project work: at the core of the Unit is the principle that learners will develop skills and acquire knowledge which they will use to create 2D graphics and to aid the development of problem solving and graphic design skills. Contexts carefully selected for learning should support this principle.

Themed or short self-contained project work: presenting the Unit skills and knowledge around a theme will, for some learners and centres, aid learning by highlighting the connections between graphic styles and techniques via a single extended project. It may also prepare learners for progression through subsequent Graphic Communication Courses. Similarly, presenting project work as a series of short, self-contained projects may encourage learners by setting shorter, more achievable goals and allow centres to adapt and refresh project work to suit the learner. Both approaches are acceptable. Centres must ensure that the Unit Assessment Standards can be met when planning for learning and teaching. Careful and strategic planning will ensure that learners are able to be successful in achieving those Assessment Standards.

Electronic learning

There are a number of online resources which will be familiar to most centres. These provide a range of step-by-step tutorials from relative novice to advanced user. Centres might consider these for school and out-of-school learning activities to support development of skills and understanding and in accelerating the production of graphics.

Sequence of Outcomes

There is no prescribed order in which centres must deliver the Unit Outcomes. Resources and techniques will vary between centres and so it is likely that a preferred approach will emerge quickly or might follow an existing well-proven strategy within the centre.

Where this Unit is being delivered as part of the Course, it is likely that aspects will be delivered alongside or integrated with the *3D and Pictorial Graphic Communication* Unit. This common sense approach will support the development of transferable skills and a richer learning experience.

There are three Outcomes to this Unit. Broadly speaking:

- 1 Produce and interpret simple 2D sketches⁴ and drawings

⁴ Drawing and sketching, unless otherwise dictated by Outcome, refers to manual and/or electronic methods.

- 2 Produce preliminary 2D colour designs and illustrations for single-page promotional displays
- 3 Create simple 2D promotional graphic layouts

The selection of a theme or context for learning is likely to determine how the Unit is delivered. It is unlikely that each Outcome will be either delivered in order or delivered discretely, as the skills and knowledge and their application permeates all three Outcomes. Centres may decide to deliver Outcomes 1 and 2 in parallel and to develop the skills and knowledge together. Outcome 3 is more likely, although not necessarily, to follow on or (with applicable work pieces) 'feed in' where required from Outcomes 1 and 2.

Whatever approach is adopted, centres must satisfy themselves that the planned delivery best supports their own needs and in particular those of their learners. More information is given in the *Course Support Notes* to assist in strategies for cross-Unit planning — with particular reference to tasks.

Meeting the needs of all learners

The National 5 Graphic Communication Course and its Units are designed to be hierarchical. This should support multi-level teaching where required. It is likely that most centres will be familiar with many strategies for multi-level approaches in Graphic Communication from existing good practice.

Many of the skill sets between National 5 and National 4 are similar, with National 5 generally requiring more depth of treatment and complexity. Introductory skills development, tuition and demonstration will serve both levels with National 5 being extended. Attention is drawn to the terms used in the Outcome descriptions for National 5, eg 'very good', and tighter tolerances for accuracy, etc. In addition, National 5 description of Outcomes reveals extended content coverage.

In each of the Outcomes, there are some key differences in the expectations of learners between National 5 and National 4. These key differences can be found in the detail of the *Unit Specifications* for both National 5 and National 4.

In each of the Outcomes, it is likely that groups of learners will be following common activities. At National 5, and in line with the Assessment Standards, it is likely that well planned enrichment and development activities will provide the additional materials and learning for National 5 learners. Such differentiation would include materials, study resources, time planning and independent learning tasks.

It is also likely that set and similar themes or contexts will support learners undertaking National 5 and National 4 in the same group. Centres are discouraged from repeating the same theme or context where a learner is potentially progressing to Higher in subsequent academic sessions, to avoid the potential for repetition. This might suggest bi-annual themes.

Centres should ensure that sufficient time and practice activities are given over to learners undertaking the Course assessment. For National 5, this will include in such cases practice for examination as well as the assignment activity.

Developing skills for learning, skills for life and skills for work

Learners are expected to develop broad generic skills as an integral part of their learning experience. The *Unit Specification* lists the skills for learning, skills for life and skills for work that learners should develop through this Unit. These are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and must be built into the Unit, where there are appropriate opportunities. The level of these skills will be appropriate to the level of the Unit.

The table below highlights opportunities to develop these skills during this Unit.

2 Numeracy	
2.2 Money, time and measurement	◆ Measurement, dimension
4 Employability, enterprise and citizenship	
4.2 Information and communication technology (ICT)	<ul style="list-style-type: none"> ◆ Using graphic packages ◆ Digital input and graphic devices
5 Thinking skills	
5.2 Understanding	◆ Techniques and their application, the impact of graphic activities
5.3 Applying	◆ Graphic knowledge to simple problems and in communicating ideas
5.4 Analysing and evaluating	◆ Evaluating the impact of graphics

Approaches to assessment and gathering evidence

The National 5 Graphic Communication Course is intended to be very flexible in the approaches that centres may take to gather and record evidence of learners' competence. What follows are merely suggestions and there are many formats in which the evidence can be obtained from and presented by learners. Centres are encouraged to be flexible and innovative in their approaches, making best use of resources and information technology where appropriate.

Outcome 1

The learner will:

1 Produce and interpret 2D sketches and drawings by:

- 1.1 Producing well-proportioned orthographic sketches of very good line quality of everyday objects and/or geometric forms
- 1.2 Producing orthographic drawings and details of everyday objects, buildings, structures and/or geometric shapes and forms to within an accuracy of 1 mm
- 1.3 Extracting information from given drawings to inform new drawing work
- 1.4 Identifying and applying appropriate drawing standards, protocols and conventions where these apply; including third angle projection, dimensioning, line types and the use of scale
- 1.5 Explaining basic computer aided design commands, techniques and practice

Notes on Outcome 1

Outcome 1 could be assessed via a range of Outcome tasks which will, in part, contribute to the production a folio⁵ of evidence. Strategies might include key drawing and sketching skills or knowledge acquisition activities/tasks which lead learners to specific assessment tasks and can demonstrate a required standard. A suitable method might be an activity set of Unit-standard drawings which can be selected and completed at times best suited to the learner.

It is expected that the work will draw on a broad range of skills and demonstrate that a range of methodologies, approaches and resources have been used.

Orthographic drawings, however produced, could be assessed on a topic-by-topic basis. Centres should ensure that these provide the necessary rigour to be valid. These could be known as a Unit-standard task.

Attention is drawn to tolerances at National 4 and National 5 which are 2mm and 1mm respectively.

Evidence may be obtained from a variety of sources and need not necessarily always be in drawing or written response format.

⁵ Folio refers to a collection of evidence which satisfies the standards

Outcome 2

The learner will:

2 Produce preliminary 2D colour designs and illustrations for single-page promotional displays by:

- 2.1 Illustrating 2D sketches or drawings of everyday objects, to convey surface texture, tonal change and colour
- 2.2 Planning and justifying the choice of colours, layout and presentation techniques in promotional graphic displays
- 2.3 Explaining aspects of colour theory including: primary, secondary and tertiary colours; tints and shades; warm and cool colours; advancing and receding; creating contrast, harmony and unity through the use of colour in promotional and marketing contexts; and moods created by the main colour groups
- 2.4 Planning the design and justifying the choice of informational graphic to suit a given scenario
- 2.5 Identifying the design principles and elements used to create promotional layouts and displays

Notes on Outcome 2

In gathering evidence for Outcome 2, centres may take a broad approach. Key words are: illustrating, explaining, planning, and identifying. While there is no need to gather evidence specifically in this Outcome of drawing and sketching abilities, it is likely that the learner will be encouraged to continue to develop their sketching and drawing skills through activities in this Outcome. It is acceptable for evidence to be in manual and/or digital format, where this assists effective learning.

Outcome 3

The learner will:

3 Create 2D promotional graphic layouts by:

- 3.1 Producing single-page displays or layouts that have significant and relevant visual impact and incorporating recognised desktop publishing techniques and including; a main feature, a backdrop and text including heading/title and extended text; consistent and effective use of contrast, harmony, alignment, dominance, unity and depth; and one feature from: cropping, text wrap, flow text along a path, bleed, transparency or drop shadow
- 3.2 Producing informational graphics that transmit statistical information clearly and concisely and have relevant visual impact
- 3.3 Explaining basic DTP terms used in the design and production of promotional and information graphics
- 3.4 Explaining the impact of graphic communication technologies on our environment and society

Notes on Outcome 3

Evidence for Outcome 3 is likely to include a small collection of best work, or form part of a learner's evidence collection. In addition, centres may consider short assessment tasks to determine the learner's ability to identify DTP terminology. These need not be written tasks. Activities such as short research activities and reports or presentations may well provide adequate evidence in identifying the

impacts of Graphic Communication technologies. In recording evidence a collection of graphic tasks, responses and work will inform and provide a record of assessment decisions. This might include one best example of each topic identified within it. The Unit portfolio can also contain 2D sketches (orthographic layouts and circular and rectilinear shapes) illustrations, displays, written evaluation, promotional and preliminary design work with justification of choice.

Learners who do not respond successfully to a Unit-standard task would benefit from constructive feedback and additional practice before tackling an alternative Unit-standard task. The assessments should be informal and as far as possible should feel, to the learner, like a contiguous part of the learning process. Learning and assessment should continue throughout the Unit. Teachers should note that the processes and journey the learner follows in arriving at their solution are as important as the solution itself. The teacher's judgement in determining the learner's input is crucial.

Centres should be very clear on what represents the capability and creativity of the learner and that of the software when making assessment judgments. Software wizards for items like templates are not representative of the learner's work and should not be accredited to the learner.

Descriptions and justifications, although likely to be in written form, may be presented in a range of ways — videos, blogs, short essays or reports, audio commentaries or discussions and debates. Centres should take care to ensure that softer evidence is of equal rigour.

All evidence gathered is required to demonstrate that the learner has achieved the Assessment Standard. Where a broad range of techniques and activities have been used in teaching and learning, it is likely that the learner will have benefited from a rich and meaningful experience. This should be partnered with a clear record of how the evidence has been obtained and how and what it is evidencing.

Combining assessment within Units

The assessment most likely to be combined within the Unit is knowledge and its application to graphic tasks. Evidence may be gleaned through activities planned across the Outcomes. For example, knowledge developed in the identification of drawing standards, symbols, conventions, recognised terms and commands could be found in the application of those to planning and justification activities required for effective graphic production. This is likely to ease the learner's burden of assessment. The evidence may be selected over any number of drawings (manual and computer aided design), illustrations and activities. A knowledge checklist may assist in tracking the progress of the learner.

A single Unit assessment may assist in confirming the learner's attainment where there are gaps in evidence although it is unlikely that this will be used to assess the entire Unit. Centres might wish to use an Outcome assessment activity as a failsafe approach to ensure evidence is complete or decide against it where it is clear that cross-Outcome activities are a sufficient means to gather rigorous evidence.

Where Assessment Standards are met in a collection of project work, it is more likely that the burden of assessment will be reduced. The principle being that

quality takes precedence over quantity and that reducing the number of evidence items allows the learner to spend more time developing and refining skills, underpinned by solid knowledge and understanding.

Unit assessment

The learner must demonstrate attainment of **all** of the Outcomes and their associated Assessment Standards. Assessment must be valid, reliable and fit for purpose.

SQA does not specify the methods of assessment to be used; teachers should determine the most appropriate method for their learners. In many cases, evidence (which may be oral or observational) will be gathered during normal classroom activities, rather than through formal assessment instruments.

Centres are expected to maintain a detailed record of evidence, including oral or observational evidence. Evidence in written or presentation format should be retained by the centre for verification.

Authentication of evidence

All evidence should be gathered under supervised conditions.

In order to ensure that the learner's work is their own, the following strategies are recommended:

- ◆ personal interviews with learners where teachers can ask additional questions about the completed work
- ◆ asking learners to do an oral presentation on their work
- ◆ ensuring learners are clear about acknowledging sources
- ◆ using checklists to record the authentication activity

Further information is given on the SQA secure website for Unit Assessment Support if assessing on a Unit-by-Unit basis.

Equality and inclusion

The in-built flexibility of production methods both encourages learning through the entire range of graphic skills and also supports those who might experience some difficulties. Methods can be tailored to suit preferences and ICT undoubtedly has an important supporting role to play.

The choice in setting briefs specific to the learners' needs or to the local environment and local expertise can support learning through personalising the learning process.

It is recognised that centres have their own duties under equality and other legislation and policy initiatives. The guidance given in these *Unit Support Notes* is designed to sit alongside these duties but is specific to the delivery and assessment of the Unit.

Alternative approaches to Unit assessment to take account of the specific needs of learners can be used. However, the centre must be satisfied that the integrity of the assessment is maintained and that the alternative approaches to assessment will, in fact, generate the necessary evidence of achievement.

Appendix 1: Reference documents

The following reference documents will provide useful information and background.

- ◆ Assessment Arrangements (for disabled learners and/or those with additional support needs) — various publications on SQA’s website:
<http://www.sqa.org.uk/sqa/14976.html>
- ◆ [*Building the Curriculum 4: Skills for learning, skills for life and skills for work*](#)
- ◆ [*Building the Curriculum 5: A framework for assessment*](#)
- ◆ [*Course Specifications*](#)
- ◆ [*Design Principles for National Courses*](#)
- ◆ [*Guide to Assessment \(June 2008\)*](#)
- ◆ *Principles and practice papers for curriculum areas*
- ◆ *Research Report 4 — Less is More: Good Practice in Reducing Assessment Time*
- ◆ *Coursework Authenticity — a Guide for Teachers and Lecturers*
- ◆ [*SCQF Handbook: User Guide*](#) (published 2009) and SCQF level descriptors (to be reviewed during 2011 to 2012):
www.sqa.org.uk/sqa/4595.html
- ◆ [*SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work*](#)
- ◆ [*Skills for Learning, Skills for Life and Skills for Work: Using the Curriculum Tool*](#)
- ◆ SQA Guidelines on e-assessment for Schools
- ◆ SQA Guidelines on Online Assessment for Further Education
- ◆ SQA e-assessment web page: www.sqa.org.uk/sqa/5606.html

Administrative information

Published: May 2015 (version 2.0)

History of changes to Unit Support Notes

Version	Description of change	Authorised by	Date
1.1	Minor changes to assessment information.	Qualifications Development Manager	July 2013
2.0	Computer aided Design/Draughting' replaced with 'Computer aided Design' in Outcome 1 and throughout the document.	Qualifications Manager	May 2015

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Unit Support Notes — 3D and Pictorial Graphic Communication (National 5)



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Please refer to the note of changes at the end of this document for details of changes from previous version (where applicable).

Introduction

These support notes are not mandatory. They provide advice and guidance on approaches to delivering and assessing the *3D and Pictorial Graphic Communication* (National 5) Unit. They are intended for teachers and lecturers who are delivering this Unit. They should be read in conjunction with:

- ◆ the *Unit Specification*
- ◆ the *Course Specification*
- ◆ the *Course Assessment Specification*
- ◆ the *Course Support Notes*
- ◆ appropriate assessment support materials

General guidance on the Unit

Aims

The general aim of this Unit is to develop the learner's skills and creativity in producing and interpreting 3D and pictorial graphics.

It will enable the learner to initiate, develop and communicate ideas and solutions using graphic techniques in simple and familiar contexts with some demonstrating complex features. Learners will develop their presentation skills through the use of analysis and evaluative skills. They will develop their knowledge and understanding of graphic communication techniques and improve their skill in drawing⁶, sketching and 3D modelling. The Unit also develops transferable skills — application, creativity, numeracy and ICT in a graphic communication context.

This Unit can be delivered

- ◆ as a stand-alone Unit
- ◆ as part of the National 5 Graphic Communication Course

This Unit is a mandatory Unit of the National 5 Graphic Communication Course.

Progression into this Unit

Entry into this Unit is at the discretion of the centre; however, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- ◆ 3D and Pictorial Graphic Communication (National 4) Unit

Learners may also have gained relevant skills and knowledge through other education systems or from their own interests and informal learning.

Centres should satisfy themselves that learner's prior learning will support the likelihood of success.

Skills, knowledge and understanding covered in this Unit

Information about skills, knowledge and understanding is given in the National 5 Graphic Communication *Course Support Notes*.

If the Unit is being delivered as part of the National 5 Graphic Communication Course, the teacher should refer to the 'Further mandatory information on Course coverage' section within the *Course Assessment Specification* for detailed content.

⁶ Drawing, unless otherwise dictated by Outcome, refers to manual and/or electronic methods.

Progression from this Unit

On successful completion of this Unit, the following Units and Courses may provide appropriate progression pathways for learners:

- ◆ 3D and Pictorial Graphic Communication (Higher) Unit
- ◆ other technological subjects at Higher

This Unit may support a learner's access to further education or employment as part of a wider entrance portfolio.

Centres should take account of the learner's strengths and the appropriateness of this Unit for entry to other Courses or programmes of study.

Approaches to learning and teaching

The National 5 Graphic Communication Course is designed around graphic skills development partnered with a high degree of personalisation, choice and expression. This *3D and Pictorial Graphic Communication* Unit focuses on communicating ideas, technical, informative, and expressive information using three-dimensional graphic designs and responses. During the Unit, learners will be working and learning in a range of graphic formats and contexts. Centres should plan thoroughly to ensure that the experience is a connected one rather than a 'bit-piece' approach.

Information with regard to knowledge and skills can be found in the 'Further mandatory information on Course coverage' section of the *Course Assessment Specification* which will provide a useful guide to centres as to what content must be covered. Most centres will be very familiar with the content described and are likely to have existing resources which can be used for teaching. While many of these resources will be in paper format, centres might consider how they might be utilised or adapted using electronic methods where a learner's preference dictates. For example, where the learner is demonstrating knowledge rather than process, alternative methods may be able to reveal evidence of learning — using real objects, photographs, discussions and experimental tasks. In both cases, electronic or manual, centres must ensure that where fundamental knowledge and principles are being developed, the methodology that best supports effective learning is used.

Where process-based or skill demonstration is required, the centre may wish to consider a mixture of response techniques including manual and/or electronic. The purpose is to introduce greater flexibility in learning and teaching and personalisation and choice but without loss of rigour. Manual and electronic methods each have their own distinct characteristics for learning and teaching. In this Unit some work can only be undertaken using electronic methods.

Spatial awareness, cognition and reasoning can be approached in a number of ways which support the activity of graphic communication. Holding, rotating, disassembling, re-assembling, folding, photographing, predicting, formal drawing, and sketching are all useful techniques to build learners' capacity and understanding.

ICT is an integral part of learning and teaching in graphic communication and should be utilised effectively and appropriately. As developments take place in technology, learning and teaching approaches may reflect and embrace the changes where they can assist learning in a positive way. For example, where a learner has the facility and desire to demonstrate sketching using electronic devices or applications, this should be encouraged. This development in learning can be captured and evidenced digitally using blogs, digital capture, e-mail or other methods.

3D models and pictorial drawing and sketching: learners should experience more than a single approach to creating 3D and pictorial work. Although it is likely that most centres will use pencil work as a starting point to build skills and techniques, this might be transferred to or replaced by electronic sketching where expertise, equipment and resources provide such opportunities. Use of paint-

styled packages or applications (which allow the on-screen placement of lines and the ability to trim) would be worth considering. In such cases, constructional work might be done in different colours from outline work. In National 5, these should be everyday objects or geometrics with a degree of complexity — likely to incorporate curves and simple sections. Applications such as Google Sketchup or 2D drawing/sketch apps such as Autodesk Sketchbook Pro⁷ may assist learners in getting to grips with the principles of ‘sketching’ for simple 3D objects in wireframe. This might then be advanced to more realistic representations, using the range of solid and surface modelling software available. It is important that learners can identify the steps required to construct models and the associated commands. Where computer aided design has been utilised to generate certain aspects of the work, the learner must be able to demonstrate understanding of the principles of how and why views are generated. Reviewing and evaluating existing work alongside the related products will assist learners in determining the effectiveness and role of these types of graphics, as they communicate the visual aspects or detail of the product.

Pictorial and 3D colour illustrations: it is likely that when exploring the techniques and practices for conveying surface texture, tonal change and colour application, learners will probably use prepared examples to enable them to see the effects of different techniques on the same object — a simple rectilinear, straight edged form and those with curves, voids and various parts, rendered for different textures for example. Learners may attempt to predict the effects of lighting changes on the appearance of the objects and the applicability of colour to given situations. In beginning their own work, practice with a small variety of media will build skills in rendering. Centres may wish to use pre-prepared representations for learners to apply colour, tone and texture, to utilise the work already done by learners through traces, or use software applications to render objects on-screen. In manual application, it is important that learners develop skills in mixed media when rendering. In digital apps, opportunities to photograph sketches and apply colour, shade and tone ‘on screen’ are available and are an option and they can be emailed, saved, exported if required. Where learners are not familiar with such tasks using software, sufficient time must be built in the teaching to allow learners to reach competence. Work in colour and contexts will support the learners when considering, creating and applying appropriate background for their 3D model objects. It is important that learners can identify the steps required to render models and the associated commands.

Create simple pictorial or 3D promotional displays

Presenting the Unit skills and knowledge around a theme or in short contained tasks will, for some learners and centres, aid learning by highlighting the connections between graphic styles and techniques as they apply to a given situation or problem. This might be approached in mini-brief format. Such approaches will gradually build proficiencies in thinking, designing and applying graphic knowledge and skills in context.

Promotional displays might be a variety of formats which can demonstrate the necessary planning, skills and standards. This could be in paper or digital production or in the form of a simple card model. Centres are reminded that wizards do not reflect the learners’ capabilities and should not be used to accredit pupils.

⁷ Other Apps and software will also support his kind of work

E-learning

There are a number of online resources which will be familiar to most centres. These provide a range of step-by-step tutorials from relative novice to advanced user. Centres might consider these for school and out-of-school learning activities to support development of skills and understanding and in accelerating the production of graphics. There are many videos which demonstrate CAD/CAM in the packaging and graphics industries.

Sequence of Outcomes

There is no prescribed order in which centres must deliver the Unit Outcomes. Resources and techniques will vary between centres and so it is likely that a preferred approach will emerge quickly or might follow an existing well-proven strategy within the centre. Where this Unit is being delivered as part of the Course, it is likely that aspects will be delivered alongside or integrated with the *2D Graphic Communication* Unit. This common sense approach will support the development of transferable skills and a richer learning experience.

There are three Outcomes to this Unit. Broadly speaking:

- 1 Produce and interpret pictorial sketches⁸, pictorial drawings and 3D models
- 2 Produce pictorial and 3D colour illustrations
- 3 Create pictorial or 3D promotional displays

The selection of a theme or context for learning is likely to determine how the Unit is delivered. It is unlikely that each Outcome will be either delivered in order or delivered discretely as the skills and knowledge and their application permeates all three Outcomes. Centres may decide to deliver Outcomes 1 and 2 in parallel to develop the skills and knowledge together. Outcome 3 is more likely, although not necessarily, to follow on or (with applicable work pieces) 'feed in' where required from Outcomes 1 and 2. Outcome 3 may also be taken entirely as an end point to the learner's Unit experience if desired.

Whatever approach is adopted, centres must satisfy themselves that the planned delivery best supports their own needs and in particular those of their learners. More information is given in the *Course Support Notes* to assist in strategies for cross-Unit planning — with particular reference to tasks.

Meeting the needs of all learners

The National 5 Graphic Communication Course and its Units are designed to be hierarchical. This should support multi-level teaching where required. It is likely that most centres will be familiar with many strategies for multi-level approaches in Graphic Communication from existing good practice.

Many of the skill sets between National 5 and National 4 are similar, with National 5 generally requiring more complex and demanding interpretations, responses, activities, and an increase in graphic treatments. Introductory skills development, tuition and demonstration will serve both levels with National 5 being extended. Attention is drawn to the terms used in the Outcome descriptions for National 5, eg 'very good', 'describing', 'extended', 'use of scale', 'increased accuracy', etc. In addition, National 5 description of Outcomes demonstrates extended content coverage.

⁸ Drawing and sketching, unless otherwise dictated by Outcome, refers to manual and/or electronic methods.

In each of the Outcomes, there are some key differences in the expectations of learners between National 5 and National 4. These key differences can be found in the detail of the *Unit Specifications* for both National 5 and National 4.

In each of the Outcomes, it is likely that groups of learners will be following common activities. At National 5, and in line with the Assessment Standards, it is likely that well planned enrichment and development activities will provide the additional materials and learning for National 5 learners. Such differentiation would include materials, study resources, time planning and independent learning tasks.

It is also likely that set and similar themes or contexts will support learners undertaking National 5 and National 4 in the same group. Centres are discouraged from repeating the same theme or context where a learner is likely to progress from National 5 to Higher in subsequent academic sessions to avoid the potential for repetition. This might suggest bi-annual themes.

Developing skills for learning, skills for life and skills for work

Learners are expected to develop broad generic skills as an integral part of their learning experience. The *Unit Specification* lists the skills for learning, skills for life and skills for work that learners should develop through this Unit. These are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and must be built into the Unit where there are appropriate opportunities. The level of these skills will be appropriate to the level of the Unit.

The table below highlights opportunities to develop these skills during this Unit.

2 Numeracy	
2.2 Money, time and measurement	◆ Measurement, dimension

4 Employability, enterprise and citizenship	
4.2 Information and communication technology (ICT)	<ul style="list-style-type: none"> ◆ Using graphic packages ◆ Digital input and graphic devices

5 Thinking skills	
5.2 Understanding	◆ Techniques and their application, impact of graphic activities
5.3 Applying	◆ Graphic knowledge to simple problems and in communicating ideas
5.4 Analysing and evaluating	◆ Analysing and evaluating existing and new graphic solutions

Approaches to assessment and gathering evidence

The Graphic Communication (National 5) Course and its component Units are intended to be very flexible in the approaches that centres may take to gather and record evidence of learners' competence. What follows are merely suggestions and there are many formats in which the evidence can be obtained from and presented by learners. Centres are encouraged to be flexible and innovative in their approaches, making best use of resources and information technology where appropriate.

Outcome 1

The learner will:

- 1 Produce and interpret pictorial sketches, pictorial drawings and 3D models by:**
 - 1.1 Using graphic communication equipment to create pictorial sketches of everyday objects and/or geometric forms in common pictorial formats that are accurate, well-proportioned and with very good line quality
 - 1.2 Using graphic communication equipment to produce pictorial drawings and 3D computer aided designed models of everyday objects and/or geometric forms to within an accuracy of 1 mm
 - 1.3 Using drawing standards, protocols and conventions which are appropriate to the purpose, including correct projection methods and use of scale
 - 1.4 Describing a range of computer aided design commands, techniques and practices employed in the production of 3D graphics and models, using appropriate terminology
 - 1.5 Identifying and describing types of pictorial graphic communication used in the design, manufacturing and marketing of a product

Notes on Outcome 1

Outcome 1 could be assessed via a range of Outcome mini-tasks. While some are used to develop proficiencies, others can be focused on assessment of the Assessment Standard. It may genuinely be the case that the quality of work in the proficiency tasks overtakes the Assessment Standard. If this is the case, then these could be used for evidence. In supporting learners to overtake the Assessment Standard, centres are required to ensure that the work set is not overly complex.

At National 5, the Assessment Standards require everyday objects and/or geometric forms which have a degree of complexity. Sketches, drawings and models should include curves, sections, developments and associated conventions, holes, voids, hidden detailing, etc. Accuracy of work needs to be no less than 1 mm; this can be physically measured from a produced paper drawing or by a dimension tool on-screen. Centres should be flexible in their approach to this and look for consistency across the learner's work.

Standards and conventions are likely to be observed in the learner's work as they progress their learning, and the centre can derive their own methodology for recording this evidence. It may be a checklist, commentary, written or graphical work. In the identification of the main types of graphic communication used in a

product's design, manufacture and marketing, evidence might even take the form of a class presentation or short research and report activity, among other possibilities.

Centres are reminded that evidence may be obtained from a variety of sources and need not necessarily be in drawing or written response format.

It is expected that the work will draw on a broad range of skills and demonstrate that a range of methodologies, approaches and resources have been used.

Orthographic drawings, however produced, could be assessed on a topic-by-topic basis. Centres should ensure that these provide the necessary rigour to be valid. These could be known as a Unit-standard task.

Outcome 2

The learner will:

2 Produce pictorial and 3D colour illustrations by:

- 2.1 Illustrating pictorial sketches or drawings of everyday objects to convey surface texture, tonal change and colour
- 2.2 Creating rendered 3D computer aided designed models of everyday objects to interpret the light source, surface texture and materials
- 2.3 Using computer aided design or Illustration software to create shadows or reflections of the 3D model on a surface
- 2.4 Describing using appropriate terminology, basic computer aided design commands, techniques and practice employed in the production of 3D illustrations, using appropriate terminology

Notes on Outcome 2

In this Outcome, it is probable that the learner will produce a concise or mini-portfolio of best work to demonstrate that they have overtaken the Assessment Standards. This might not necessarily be the case where aspects of the evidence can be gleaned from other Outcomes. Models produced in Outcome 3, for example, may demonstrate fully the requirements for the creation of rendered 3D computer aided designed models in Outcome 2. Centres should look to the quality and application of rendering techniques which can suggest texture in an object, tonal change and appropriate colour. These need not be shown in isolation and may be incorporated into single pieces if desired. This aside, it should be clear from the evidence that the features are demonstrated — particularly with depth of treatment, 'shadows or reflections of the 3D model on a surface'. Applying all three features to one object may be detrimental to the overall visual appearance of the work where the learner is still developing proficiencies.

Outcome 3

The learner will:

3 Create pictorial or 3D promotional displays by:

- 3.1 Creating, in response to a brief or theme, preliminary designs for a single-page promotional layout to display a rendered pictorial or 3D graphic and extended textual information with relevant visual impact

- 3.2 Using graphic communication equipment to produce a single-page promotional document incorporating a rendered pictorial or 3D graphic and extended textual information

Notes on Outcome 3

There are two main aspects to Outcome 3 — creating preliminary designs and producing a single page document.

Key features include that the learning must respond to a brief. Outcome 3, in essence, brings together Outcomes 1 and 2. The evidence is likely to take the form of a planning document accompanied by a graphic product in both cases. It would be useful to the learner if both of these elements followed the same theme or themes developed during Outcomes 1 and 2. Centres will be looking for evidence which not only confirms the learner's graphic ability, but that reflects the planning that has taken place beforehand. The 3D computer aided designed model for the promotional document should demonstrate aspects of Outcome 2, namely texture or surface detail, tonal change and colour, as well as extended textual information.

Centres should be very clear on what represents the capability and creativity of the learner and that of the software when making assessment judgments. Software wizards for items like templates are not representative of the learner's work and should not be accredited to the learner.

Descriptions and justifications, although likely to be in written form, may be presented in a range of ways — videos, blogs, short essays or reports, audio commentaries or discussions and debates. Centres should take care to ensure that softer evidence is of equal rigour.

All evidence gathered is required to demonstrate that the learner has achieved the Assessment Standard. Where a broad range of techniques and activities have been used in teaching and learning, it is likely that the learner will have benefited from a rich and meaningful experience. This should be partnered with a clear record of how the evidence has been obtained and how and what it is evidencing.

Combining assessment within Units

Centres are encouraged to devise their own assessment structure and timetable. Integrating assessment across Outcomes also supports a learner's higher order skills development through application of knowledge and evaluative skills in a creative project-based learning experience. Centres may also find the combination of assessments across Units beneficial to a learner's development as this supports the links in learning between the Units of work in Graphic Communication.

Unit assessment

The learner must demonstrate attainment of **all** of the Outcomes and their associated Assessment Standards. Assessment must be valid, reliable and fit for purpose.

SQA does not specify the methods of assessment to be used; teachers should determine the most appropriate method for their learners. In many cases,

evidence (which may be oral or observational) will be gathered during normal classroom activities, rather than through formal assessment instruments.

Centres are expected to maintain a detailed record of evidence, including oral or observational evidence. Evidence in written or presentation format should be retained by the centre for verification.

Authentication of evidence

All evidence should be gathered under supervised conditions.

In order to ensure that the learner's work is their own, the following strategies are recommended:

- ◆ personal interviews with learners where teachers can ask additional questions about the completed work
- ◆ asking learners to do an oral presentation on their work
- ◆ ensuring learners are clear about acknowledging sources
- ◆ using checklists to record the authentication activity

Further information is given on the SQA secure website for Unit Assessment Support if assessing on a Unit-by-Unit basis.

Equality and inclusion

The in-built flexibility of production methods both encourages learning through the entire range of graphic skills and also supports those who might experience some difficulties. Methods can be tailored to suit preferences and ICT undoubtedly has an important supporting role to play.

The choice in setting briefs specific to the learner's needs or to the local environment and local expertise can support learning through personalising the learning process.

It is recognised that centres have their own duties under equality and other legislation and policy initiatives. The guidance given in these *Unit Support Notes* is designed to sit alongside these duties but is specific to the delivery and assessment of the Unit.

Alternative approaches to Unit assessment to take account of the specific needs of learners can be used. However, the centre must be satisfied that the integrity of the assessment is maintained and that the alternative approaches to assessment will, in fact, generate the necessary evidence of achievement.

Appendix 1: Reference documents

The following reference documents will provide useful information and background.

- ◆ Assessment Arrangements (for disabled learners and/or those with additional support needs) — various publications on SQA’s website:
<http://www.sqa.org.uk/sqa/14976.html>
- ◆ [*Building the Curriculum 4: Skills for learning, skills for life and skills for work*](#)
- ◆ [*Building the Curriculum 5: A framework for assessment*](#)
- ◆ [*Course Specifications*](#)
- ◆ [*Design Principles for National Courses*](#)
- ◆ [*Guide to Assessment \(June 2008\)*](#)
- ◆ *Principles and practice papers for curriculum areas*
- ◆ *Research Report 4 — Less is More: Good Practice in Reducing Assessment Time*
- ◆ *Coursework Authenticity — a Guide for Teachers and Lecturers*
- ◆ [*SCQF Handbook: User Guide*](#) (published 2009) and SCQF level descriptors (to be reviewed during 2011 to 2012):
www.sqa.org.uk/sqa/4595.html
- ◆ [*SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work*](#)
- ◆ [*Skills for Learning, Skills for Life and Skills for Work: Using the Curriculum Tool*](#)
- ◆ SQA Guidelines on e-assessment for Schools
- ◆ SQA Guidelines on Online Assessment for Further Education
- ◆ SQA e-assessment web page: www.sqa.org.uk/sqa/5606.html

Administrative information

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History of changes to Unit Support Notes

Version	Description of change	Authorised by	Date
1.1	Minor changes to assessment information.	Qualifications Development Manager	July 2013
2.0	Computer aided Design/Draughting' replaced with 'Computer aided Design' in all Outcomes and throughout the document.	Qualifications Manager	May 2015

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