



City & Guilds Level 3 Diploma in Painting and Decorating (6707-33)

Version 2.5 (September 2024)

Qualification Handbook

Qualification at a glance

Subject area	Building and construction
City & Guilds number	6707
Age group approved	Aged 16 or above
Entry requirements	City & Guilds does not set entry requirements for this qualification.
Assessment	Multiple choice examination, practical demonstration/assignment
Grading	Pass/Fail
Approvals	Full approval
Support materials	Centre handbook, Assessor guidance, Task manual
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds Level 3 Diploma in Painting and Decorating	6707-33	600/8592/7	460	500

Version and date	Change detail	Section
1.1 July 2013	Test specification for unit 313 (test 5) had been amended	Test specifications under Assessment
1.2 August 2023	Correct AC 3.4 – Unit 301/701	Units
2.0 January 2014	Entry requirement information added	Centre requirements
2.1 July 2014	Centre staffing amended	Centre requirements
2.2 December 2015	Updated range for LO 1, 3 and 4 in unit 201	Units
2.3 January 2019	Updated range for LO 5 in unit 220	Units
2.4 March 2022	TQT GLH clarification	TQT Tables added
2.5 September 2024	Handbook reviewed and updated to new template	Throughout

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1 Introduction

This document tells you what you need to do to deliver the qualification:

Area	Description
Who is the qualification for?	This qualification is for those individuals who work or want to work as a Painter and Decorator in the Construction sector.
What does the qualification cover?	<p>It allows learners to learn, develop and practise the skills required for employment and/or career as a general construction operative.</p> <p>This qualification covers the following skills:</p> <ul style="list-style-type: none">• erecting and dismantling access equipment and working platforms• applying hangings to walls and ceilings• producing specialist finishes for painted decorative work• producing specialist architectural finishes for decorative work• applying water-borne paint systems using airless equipment• applying water-borne paint systems using high volume low pressure (HVLP) spray equipment
What opportunities for progression are there?	<p>It allows candidates to progress into employment or to the following City & Guilds qualifications:</p> <p>Level 3 NVQ Diploma in Painting & Decorating</p>
Is it part of an apprenticeship framework or initiative?	The qualification is a technical certificate within the Construction Building Apprenticeship Framework.

Structure

To achieve the City & Guilds Level 3 Diploma in Painting and Decorating (6707-33), learners must achieve:

City & Guilds unit number	Unit title	Credit value	GLH
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Mandatory units:

Learners must achieve all **50** credits from these mandatory units.

6707-201 OR 6707-601	Health, safety and welfare in construction	7	70
6707-220	Erecting and dismantling access equipment and working platforms	3	30
6707-301 OR 6707-701	Principles of organising, planning and pricing construction work	7	67
6707-311	Applying hangings to walls and ceilings	7	64
6707-312	Producing specialist finishes for painted decorative work	7	64
6707-313	Producing specialist architectural finishes for decorative work	5	45
6707-314	Applying water-borne paint systems using airless equipment	7	60
6707-331	Applying water-borne paint systems using High Volume Low Pressure (HVLP) spray equipment	7	60

Total Qualification Time (TQT)

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT comprises of the following two elements:

- 1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
- 2) an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by – but, unlike guided learning, not under the immediate guidance or supervision of – a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 3 Diploma in Painting and Decorating (6707-33)	460	500

2 Centre requirements

Approval

Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document **Centre Approval Process: Quality Assurance Standards** for further information.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Resource requirements

Physical resources and site agreements

Centres will have well equipped workshops with a comprehensive range of hand and portable power tools that meet current industry standards. All powered equipment should be well maintained and PAT certified. Centres will have special designated areas within Painting and decorating workshop (cubicles or project areas) allowing candidates to practice the requirements of the units and carry out the Practical Assignments.

Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be occupationally competent or technically knowledgeable in the area(s) for which they are delivering training and/or have experience of providing training (this knowledge must be to the same level as the training being delivered)
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

Continuing professional development (CPD)

Centres are expected to support their staff in ensuring that their knowledge remains current of the occupational area and of best practice in delivery, mentoring, training, assessment and quality assurance, and that it takes account of any national or legislative developments.

Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both

CASS and City and Guilds Quality Assurance processes visit: the [What is CASS?](#) and [Quality Assurance Standards](#) documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- Internal quality assurance
- City & Guilds external quality assurance.

In order to carry out the quality assurance role, Internal Quality Assurers must

- have appropriate teaching and vocational knowledge and expertise
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification.

External quality assurance for the qualification will be provided by City & Guilds EQA process. EQAs are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments and marking/grading within and between centres by the use of systematic sampling.
- provide feedback to centres and to City & Guilds.

Learner entry requirements

City & Guilds does not set entry requirements for this qualification. However, centres must ensure that candidates have the potential and opportunity to gain the qualification successfully, for instance learners are advised to take the Level 1 and Level 2 Diplomas in order to ensure they have the right skills and knowledge for Level 3. Alternatively, the learner should provide evidence of significant industry experience, at the centres discretion.

Age restrictions

This qualification is approved for learners aged 16 or above.

Access arrangements and reasonable adjustments

City & Guilds has considered the design of this qualification and its assessments in order to best support accessibility and inclusion for all learners. We understand however that individuals have diverse learning needs and may require reasonable adjustments to fully participate. Reasonable adjustments, such as additional time or alternative formats, may be provided to accommodate learners with disabilities and support fair access to assessment.

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on the City & Guilds website.

3 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualification
- any units they have already completed or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner and the responsibilities of the centre. This information can be recorded on a learning contract.

Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth.

More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here:

[Inclusion and diversity | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com/uk/qualifications/inclusion-and-diversity)

Sustainability

City & Guilds are committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that support our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here:

[Our Pathway to Net Zero | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com/uk/qualifications/our-pathway-to-net-zero)

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy, considering and investing in the use of components that can be reused, instead of the use of disposable or single use consumables)

- reusing components wherever possible
- waste procedures (ensuring that waste is minimised, recycling of components is in place wherever possible)
- minimising water use and considering options for reuse/salvage as part of plumbing activities wherever possible.

Support materials

The following resources are available for this qualification:

Description	How to access
Assessor guidance	www.cityandguilds.com
Task manual	www.cityandguilds.com
SmartScreen	www.smartscreen.co.uk

4 Assessment

Assessment of the qualification

The following table provides the assessment requirements for each unit within the qualifications:

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
6707-201 OR 6707-601	Health, safety and welfare in construction	City & Guilds e-volve multiple choice test or on demand externally marked paper. The test covers all the knowledge in the unit.	Examinations provided on e-volve, or question papers ordered via Walled Garden.
6707-301 OR 6707-701	Principles of organising, planning and pricing construction work	City & Guilds e-volve multiple choice test or on demand externally marked paper. The test covers all the knowledge in the unit.	Examinations provided on e-volve, or question papers ordered via Walled Garden.
6707-220	Erecting and dismantling access equipment and working platforms	Multiple choice question paper, covering knowledge outcomes. Practical assignment, covering performance outcomes. Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.	www.cityandguilds.com

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
6707-311	Applying hangings to walls and ceilings	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com
6707-312	Producing specialist finishes for painted decorative work	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com
6707-313	Producing specialist architectural finishes for decorative work	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
6707-314	Applying water-borne paint systems using airless equipment	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com
6707-331	Applying water-borne paint systems using High Volume Low Pressure (HVLP) spray equipment	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com

Assessment strategy

City & Guilds has written the following assessments/assignments to use with this qualification:

- a practical tasks manual to record achievement in practical assessments
- live multiple choice papers that can be accessed on e-volve, or question papers ordered via Walled Garden

Recognition of prior learning (RPL)

Recognition of prior learning means using a person's previous experience or qualifications which have already been achieved to contribute to a new qualification.

RPL is available for Unit 201/601 Health, safety and welfare in construction .

Test specifications

The way the knowledge is covered by each test is laid out in the tables below.

Multiple Choice Papers

Each unit is assessed by an externally marked online test or an internally marked paper-based test. The assessments are set by City and Guilds. Detail on the delivery and marking of these assessments can be found in the Assessor Guidance document and the End of Units Knowledge Test document.

Test 1: Principles of organising, planning and pricing construction work

Test: 1	Duration: 60 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-301 OR 6707-701	1 Understand different types of drawn information in construction	7	17.5
	2 Understand energy efficiency and sustainable materials for construction	8	20
	3 Understand how to estimate quantities and price work for construction	10	25
	4 Understand how to plan work activities for construction	6	15
	5 Understand how to communicate effectively in the workplace	9	22.5
	Total	39	100%

Test 2: Erecting and dismantling access equipment and working platforms

Test: 2	Duration: 30 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-220	1 Understand the preparation required for using access equipment and working platforms	4	20

	3 Understand how to check access equipment and identify faults	8	40
	5 Understand how to erect access equipment and working platforms	6	30
	7 Understand how to dismantle and store components	2	10
	Total	20	100%

Test 3: Applying hangings to walls and ceilings

Test: 3	Duration: 75 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-311	1 Understand methods used in wallpaper production, trimming and jointing	12	25
	2 Understand how to select and prepare adhesives	6	13
	4 Understand how to apply papers to ceilings, walls and complex surfaces	16	33
	6 Understand how to hang wide width vinyls	5	10
	8 Understand how to hang specialist papers	7	15
	10 Know how to store materials	2	4
	Total	48	100%

Test 4: Producing specialist finishes for painted decorative work

Test: 4	Duration: 60 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-312	2 Understand how to prepare multi plate and apply stencils	15	39

	4 Understand how to replicate different types of wood using graining methods	12	32
	6 Understand how to replicate marble	6	16
	8 understand how to apply metal leaf	5	13
	Total	38	100%

Test 5: Producing specialist architectural finishes for decorative work

Test: 5	Duration: 40 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-313	1 Understand how to set out and install centre-pieces	10	42
	3 Understand how to set out and install covings	14	58
	Total	24	100%

Test 6: Applying water-borne paint systems using airless equipment

Test: 6	Duration: 60 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-314	1 Understand how to prepare work areas by protecting adjacent surfaces, furniture and fittings	6	17
	3 Understand how to select components and produce a working airless spray unit	8	23
	5 Understand how to apply water-borne coatings by airless spray	9	26
	7 Know how to rectify faults in spray equipment and defects in applied coatings	7	20
	9 Know how to clean, maintain and store airless spray equipment and materials	5	14

Total **35** 100%

Test 7: Applying water-borne paint systems using high volume- low pressure (HVLP) spray equipment

Test: 7	Duration: 50 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-331	1 Understand how to prepare work areas by protecting adjacent surfaces, furniture and fitting using high volume low-pressure spray equipment (HVLP)	6	20
	3 Understand how to set up HVLP spray equipment and materials for spray application	12	40
	5 Know how to rectify faults in spray equipment and defects in applied coatings	7	23
	7 Know how to clean, maintain and store HVLP spray equipment and materials	5	17
Total		30	100%

Test 8: Health, safety and welfare in construction

Test: 8	Duration: 60 minutes		
Unit	Outcome	Number of questions	Percentage %
6707-201 OR 6707-601	1 Know the health and safety regulations, roles and responsibilities	7	17.5
	2 Know accident and emergency reporting procedures and documentation	5	12.5
	3 Know how to identify hazards in the workplace	7	17.5
	4 Know about health and welfare in the workplace	3	7.5

	5 Know about how to handle materials and equipment safely	2	5
	6 Know about access equipment and working at heights	3	7.5
	7 Know how to work with electrical equipment in the workplace	4	10
	8 Know how to use personal protective equipment (PPE)	5	12.5
	9 Know the cause of fire and fire emergency procedures	4	10
	Total	40	100%

Practical Tasks

All of the practical tasks for the programme are contained in the Practical Task Manual. This manual contains candidate records for each task and must therefore be held securely by the centre between assessments and for 3 years following certification (see the Centre Manual for details).

These tasks require candidates to demonstrate their practical skills. Most practical tasks are assessed by observation of the candidate carrying out the tasks and/or an assessment of the final outcome/product. Details of how to mark and grade each practical task are contained within the assessment criteria and grading rules contained in the Practical Task Manual. Further information about the delivery of these tasks is contained in this Assessor Guidance document.

5 Units

Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- credit value
- assessment type
- unit aim
- endorsement by industry body
- learning outcomes, which comprise a number of assessment criteria
- range statements

Guidance for delivery of the units

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into **learning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

Range statements define the breadth or scope of a learning outcome and its assessment criteria by setting out the various circumstances in which they are to be applied.

Glossary of terms

The following key words and terms are used in the units.

Term	Definition
Ball-pien hammer	Small handheld hammer used with nail punches and when placing sprigs in window frames etc
Broom	Sweeping brush
Cherry pickers	Motor vehicle which has an extendable boom with cage where operatives stand in when painting high points/areas on buildings/bridges etc
Caulking blades	Refers to caulk boards plastic/stiff rubber
Chisel knife	Small 1inch/25mm scraper used to assist operatives removing small drawing pins, staples etc during preparation of surfaces

Term	Definition
Curtains	Heavy build-up of paint/coating sliding down surface
Drop sheets	Large dust sheets
HVLP	High volume low pressure
Making good	Preparing surfaces ready for decoration etc
Paper hanging shears	Paperhanging scissors
Pop ups	Small podium scaffold which can be collapsed down when not in use
Outriggers	Stabilisers on mobile tower scaffolds
Scuttle	Roller bucket
Skid marks	Roller head slides across surface during application of coatings
Starting lines	Starting lines
Swingbacks	Back frame of a step ladder
Wood ingrain	Woodchip paper

Unit 201/601

Health, safety and welfare in construction (unit 1)

Level:	2
GLH:	70
Credit value:	7
Assessment type:	Multiple choice question paper – externally marked
Aim:	The aim of this unit is to provide the learner with the knowledge to carry out safe working practices in construction, in relation to sourcing relevant safety information and using the relevant safety procedures at work
Endorsement by a sector or regulatory body:	This unit is endorsed by Construction Skills, the Sector Skills Council for the construction industry.

Learning outcome

The learner will:

LO1. Know the health and safety regulations, roles and responsibilities

Assessment criteria

The learner can:

AC1.1 identify **health and safety legislation** relevant to and used in the construction environment

AC1.2 state **employer and employee responsibilities** under the Health and Safety at Work Act (HASWA)

AC1.3 state **roles and responsibilities** of the Health and Safety Executive (HSE)

AC1.4 identify **organisations** providing relevant health and safety information

AC1.5 state the importance of holding on-site safety inductions and toolbox talks.

Range

Health and safety legislation

Health and Safety at Work Act, Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Control of Substances Hazardous to Health (COSHH), Construction, Design and Management (CDM) regulations, Provision and Use of Work Equipment Regulations (PUWER), manual handling operations Regulations, Personal Protective Equipment (PPE) at Work Regulations, Work at Height Regulations, Control of Noise at Work

Regulations, Control of Vibration at Work Regulations, Electricity at Work Regulations, Lifting operations and Lifting Equipment Regulations (LOLER)

Employer responsibilities

Safe working environment, adequate staff training, health and safety information, site inductions, toolbox talks, risk assessment, supervision, PPE, reporting hazards, accidents and near misses, sections 2 to 9 of Health and Safety at Work Act, CDM reg's, construction phase plans, welfare, display public liability Insurance and health and safety law poster.

Employee responsibilities

Working safely, working in partnership with the employer, reporting hazards, accidents and near misses, following organisational procedures as per Sections 2 to 9 of Health and Safety at Work Act.

Roles and responsibilities

Enforcement (including fees for intervention), legislation and advice, inspection, investigation eg site investigations.

Organisations

Health and Safety Executive (HSE) website, Institute of Occupational Safety and Health, British Safety Council, 'manufacturer', ROSPA.

Learning outcome

The learner will:

LO2. Know accident and emergency reporting procedures and documentation

Assessment criteria

The learner can:

AC2.1 state legislation used for reporting accidents

AC2.2 state major **types of emergencies** that could occur in the workplace

AC2.3 identify reportable injuries, diseases and dangerous occurrences as per RIDDOR

AC2.4 state main types of **records** used in the event of an accident, emergency and near miss and reasons for reporting them

AC2.5 identify **authorised personnel** involved in dealing with accident and emergency situations

AC2.6 state **actions** to take when discovering an accident.

Range

Types of emergencies

Fires, security incidents, gas leaks.

Records

Accident book, first aid records, organisational records and documentation.

Authorised personnel

First aiders, supervisors/managers, health and safety executive, emergency services, safety officer.

Actions

Area made safe, call for help, emergency services.

Learning outcome

The learner will:

LO3. Know how to identify hazards in the workplace

Assessment criteria

The learner can:

AC3.1 state the importance of **good housekeeping**

AC3.2 state reasons for risk assessments and method statements

AC3.3 identify **types of hazards** in the workplace

AC3.4 state the importance of the correct storage of combustibles and chemicals on site

AC3.5 identify different **signs and safety notices** used in the workplace.

Range

Good housekeeping

Cleanliness, tidiness, use of skips and chutes, segregation of materials, clear access to fire escapes, clear access to fire extinguishers.

Types of hazards

Fires, slips, trips and falls, hazardous substances (relating to inhalation, absorption, exposure, ingestion, cross-contamination), electrical, asbestos, manual handling, plant and vehicle movement, adverse weather.

Signs and safety notices

Prohibition, mandatory, warning, safe condition, supplementary.

Learning outcome

The learner will:

LO4 Know about health and welfare in the workplace

Assessment criteria

The learner can:

AC4.1 identify requirements for welfare facilities in the workplace as per Construction Design Management (CDM)

AC4.2 state health effects of noise and **precautions** that can be taken

AC4.3 state **risks** associated with drugs, alcohol and medication which could affect performance in the workplace.

Range

Precautions

Reducing noise at source, PPE, isolation, exposure time.

Risks

Reduced risk perception, loss of concentration, balance problems, absenteeism and reduced productivity.

Learning outcome

The learner will:

LO5 Know how to handle materials and equipment safely

Assessment criteria

The learner can:

AC5.1 identify legislation relating to safe handling of materials and equipment

AC5.2 state procedures for safe lifting and manual handling activities in accordance with guidance and legislation

AC5.3 state the importance of using **lifting aids** when handling materials and equipment.

Range

Lifting aids

Wheelbarrow, sack barrow, mechanical lifting aids, pallet truck.

Learning outcome

The learner will:

LO6 Know about access equipment and working at heights

Assessment criteria

The learner can:

AC6.1 identify legislation relating to working at heights

AC6.2 identify types of **access equipment**

AC6.3 state **safe methods** of use for **access equipment**

AC6.4 identify **dangers** of working at height.

Range

Access equipment:

Stepladders, ladders (pole, extension), trestles, hop-ups, proprietary scaffolding, podium, stilts

Safe methods

Regular inspection, check for broken, damaged or missing components, responsible use, consideration of adverse weather conditions, good housekeeping

Dangers

Falling tools, falling equipment, falling materials, persons falling from height (injuries to themselves and others).

Learning outcome

The learner will:

LO7 Know how to work with electrical equipment in the workplace

Assessment criteria

The learner can:

AC7.1 state **precautions** to take to avoid risks to self and others when working with electrical equipment

AC7.2 state **dangers** of using electrical equipment

AC7.3 identify **voltages** and voltage colour coding that are used in the workplace

AC7.4 state **methods** of storing electrical equipment.

Range

Precautions

Check leads, check plugs, use of cable hangers, check tools and equipment, current valid PAT certificate

Dangers

Burns, electrocution, fire.

Voltages

Battery powered, 110/115 volts, 230/240 volts and 415 volts.

Methods

Components present, equipment cleaned, checked for damage, stored in a clean and secure location.

Learning outcome

The learner will:

LO8 Know how to use Personal Protective Equipment (PPE)

Assessment criteria

The learner can:

AC8.1 state the legislation governing use of Personal Protective Equipment (PPE)

AC8.2 state **types of PPE** used in the workplace

AC8.3 state the importance of PPE

AC8.4 state why it is important to store, maintain and use PPE correctly

AC8.5 state the importance of checking and reporting damaged PPE.

Range

PPE:

Head protection, eye protection, ear protection, face/dust masks, breathing apparatus, high visibility clothing, safety footwear, gloves, sun protection, barrier cream, water proofs, knee pads, overalls/disposable clothing

Learning outcome

The learner will:

LO9 Know the cause of fire and fire emergency procedures

Assessment criteria

The learner can:

AC9.1 state **elements** essential to creating a fire

AC9.2 identify methods of fire prevention

AC9.3 state actions to be taken on discovering a fire

AC9.4 state **types of fire extinguishers** and their uses.

Range

Elements

Oxygen, fuel, heat.

Types of fire extinguishers

Water, foam, CO₂, dry powder.

Unit 301/701

Principles of organising, planning and pricing construction work

Level:	3
GLH:	67
Credit value:	7
Assessment type:	Multiple choice question paper – externally marked
Aim:	<p>The aim of this unit is to provide the learner with the knowledge of building methods and construction technology in relation to:</p> <ul style="list-style-type: none">• understanding a range of building materials used within the construction industry and their suitability to the construction of modern buildings.• organise the building process and communicate the design to work colleagues and others.
Endorsement by a sector or regulatory body:	This unit is endorsed by ConstructionSkills

Learning outcome

The learner will:

LO10 Understand different types of drawn information in construction

Assessment criteria

The learner can:

AC10.1 compare advantages and disadvantages of computer-aided design (CAD) programs to traditional drawing methods

AC10.2 explain **information** required to produce orthographic projection drawings

AC10.3 explain the process and purpose of producing a schedule from a drawing

AC10.4 explain the **benefits** of isometric projection drawings

AC10.5 explain **information** required to produce isometric projection drawings.

Range

Information (AC1.2)

Room dimensions, heights, width, sizes, heights and positions of walls, doors and window specifications, building regulations

Benefits

Pictorial view of an object, assembly or design.

Helps the client, customer, supplier or non-technical person understand how the finished product will look or what is required.

Information (AC1.5)

Isometric axis, positioning and required view of the object, lines or surfaces relative to isometric axis. Object dimensions and scale.

Learning outcome

The learner will:

LO11 Understand energy efficiency and sustainable materials for construction

Assessment criteria

The learner can:

AC11.1 evaluate the uses of thermally insulated **materials**

AC11.2 describe construction methods used to insulate against heat loss and gain

AC11.3 compare thermal values of **wall construction**

AC11.4 explain the purpose of an Energy Performance Certificate (EPC)

AC11.5 describe **sustainable materials** and their use in construction.

Range

Materials

Polyisocyanurate (PIR), expanded polystyrene (EP) fibre glass, sheep wool, mineral wool, double glazed units, multi-foil insulation.

Construction methods

location of insulation, selection of materials, compliance with Building Regulations

Wall construction

Cavity, solid and timber frame

Sustainable materials

Locally sourced, managed timber (FSC), recycled materials.

Learning outcome

The learner will:

LO12 understand how to estimate quantities and price work for construction

Assessment criteria

The learner can:

- AC12.1 describe how to estimate quantities of construction materials
 - AC12.2 describe **information required** to prepare a materials list using a schedule
 - AC12.3 explain the purpose of preferred suppliers lists when ordering materials
 - AC12.4 explain the purpose of the Bill of quantities
 - AC12.5 explain the purpose of the tendering process
 - AC12.6 explain the difference between quoting and estimating
 - AC12.7 calculate waste percentages for a construction task
 - AC12.8 describe the **information required** to prepare a quote.
-

Range

Information required (AC3.2)

Quantity, quality, colour, dimensions, location, installation details

Information required (AC3.8)

Labour, operational costs, VAT, Material cost

Learning outcome

The learner will:

LO13 Understand how to plan work activities for construction

Assessment criteria

The learner can:

- AC13.1 outline the benefits of planning the sequence of **material and labour requirements**
 - AC13.2 outline advantages and disadvantages of purchasing or hiring plant and equipment
 - AC13.3 identify **planning methods**
 - AC13.4 identify information required to produce a GANTT chart for a building project.
-

Range

Planning

Programmes of work, stock systems, critical path analysis, lead time, schedules, Gantt chart.

Planning methods

GANTT chart, critical path analysis.

Learning outcome

The learner will:

LO14 Understand how to communicate effectively in the workplace

Assessment criteria

The learner can:

- AC14.1 explain the purpose of **site documentation**
- AC14.2 identify information to create an agenda for a meeting
- AC14.3 explain information required to prepare a toolbox talk and site induction
- AC14.4 explain the purpose of a site survey and the information required to prepare a **defects list**
- AC14.5 describe information required to prepare written communications to resolve **problems**.
-

Range

Site documentation

Organisation chart, method statement, risk assessment, manufacturers' technical information, delivery notes, variation orders, permits to work, diaries, minutes, memos.

Defects

Poor standard of work, poor quality of materials, damaged materials, human error

Problems

Delivery, materials, quality, human resources.

Unit 220

Erecting and dismantling access equipment and working platforms

Level:	2
GLH:	30
Credit value:	3
Assessment type:	Multiple choice question paper Practical assignment
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to erect and dismantle access equipment and working platforms

Learning outcome

The learner will:

- LO1 Understand the preparation required for using access equipment and working platforms.

Assessment criteria

The learner can:

- AC1.1 explain **factors** to be considered when selecting **access equipment and working platforms**
- AC1.2 identify suitable **access equipment and working platforms** for types of internal and external work
- AC1.3 outline how **manufacturers' specifications and legislative requirements** relate to Work at Height Regulations.

Range

Factors

Ground conditions, height, type and duration of work, weather conditions, internal/external locations, access and egress.

Access equipment and working platforms

Ladders, stepladders, proprietary towers, trestle platforms, stepladders/ platform steps, proprietary staging and podiums, scaffold board.

Manufacturers' specifications and legislative requirements

Work at Height Regulations.

Learning outcome

The learner will:

LO2 Be able to prepare for using access equipment and working platforms.

Assessment criteria

The learner can:

- AC2.1 select suitable **access equipment and working platforms** for types of internal and external work
- AC2.2 produce risk assessments in line with manufacturer's instructions and legislative requirements for **access equipment and working platforms**.

Range

Access equipment and working platforms

Ladders, stepladders, proprietary towers, trestle platforms, stepladders/ platform steps, proprietary staging and podiums, scaffold board.

Learning outcome

The learner will:

LO3 Understand how to check access equipment and identify faults.

Assessment criteria

The learner can:

- AC3.1 describe the function of **access equipment components**
- AC3.2 identify **hazards** associated with the use of access equipment and working platforms
- AC3.3 explain the reasons for **inspections** and **inspection time periods**
- AC3.4 state the procedure for carrying out visual checks on **access equipment** prior to use.

Range

Access equipment components

Stiles, rungs, tie rods, ropes, treads, hinges, swingbacks, locking bars, non-slip inserts, scaffold boards, platform staging, tubes, boards, fittings, scaffold board.

Tubes: Standard, transoms and boarded transoms, ledgers, bracers, rails.

Fittings: Coupler, couplet, base plate.

Hazards

Falls from heights, slips, trips, cuts and abrasions, faulty equipment.

Inspections

Pre-erection, in-use.

Inspection time periods

Pre-erection, post erection, handing over, post accident and incident, inclement weather.

Learning outcome

The learner will:

LO4 Be able to check access equipment.

Assessment criteria

The learner can:

AC4.1 select suitable **access equipment components**

AC4.2 check **access equipment components**

AC4.3 adjust defective **access equipment components** to ensure they are safe to use.

Range

Access equipment components

Scaffold tags, ladders (stiles, rungs, tie, rods) treads, hinges, swingbacks, locking bars, non-slip inserts, clip-on platforms, access stairs, access hatches, braces, working platforms, stabilisers, outriggers.

Learning outcome

The learner will:

LO5 Understand how to erect access equipment and working platforms.

Assessment criteria

The learner can:

AC5.1 explain the benefits of a risk assessment for **access equipment and working platforms**

AC5.2 identify suitable **personal protective equipment (PPE)** for erecting access equipment and working platforms

AC5.3 explain the reasons for correct manual handling of components when erecting **access equipment and working platforms**

AC5.4 state the main implications of Work at Height Regulations in relation to use of **access equipment and working platforms**

AC5.5 explain the purpose of **regulation dimensions**.

Range

PPE

Hard hats, gloves, eye protection, steel toe capped boots, overalls, high visibility jacket/vest, fixed length and fall arrest.

Access equipment and working platforms

Ladders, proprietary towers, trestle platforms, stepladders and platform steps, proprietary staging and podiums, scaffold board.

Regulation dimensions

Hand rail location, guard rail location, toe boards, maximum working heights, platform widths, base to height ratios (ladders only)

Learning outcome

The learner will:

LO6 Be able to erect access equipment and working platforms.

Assessment criteria

The learner can:

- AC6.1 use **personal protective equipment (PPE)** when erecting **access equipment and working platforms**
- AC6.2 erect **access equipment and working platforms** in the correct sequence to ensure it is safe for use
- AC6.3 secure **access equipment and working platforms** where required
- AC6.4 check **access equipment and working platforms** meet current **environmental and health and safety regulations**.

Range

Access equipment and working platforms

Ladders, proprietary towers, trestle platforms, stepladders and platform steps, proprietary staging and podiums, scaffold boards.

Environmental and health and safety regulations

Work at Height regulations.

Learning outcome

The learner will:

LO7 Understand how to dismantle and store components.

Assessment criteria

The learner can:

- AC7.1 explain the correct sequence of dismantling **access equipment and working platforms**
- AC7.2 explain storage requirements for **access equipment and working platforms**.

Range

Access equipment and working platforms

Ladders, proprietary towers, trestle platforms, stepladders and platform steps, proprietary staging and podiums, scaffold boards.

Learning outcome

The learner will:

LO8 Be able to dismantle and store components.

Assessment criteria

The learner can:

AC8.1 dismantle and store **access equipment and working platforms** in accordance with organisational requirements.

Range

Access equipment and working platforms

Ladders, proprietary towers, trestle platforms, stepladders and platform steps, proprietary staging and podiums.

Unit 311

Applying hangings to walls and ceilings

Level:	3
GLH:	64
Credit value:	7
Assessment type:	Multiple choice question paper Practical assignment
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to apply hangings to walls and ceilings.

Learning outcome

The learner will:

- LO1 Understand methods used in wallpaper production and the trimming and jointing methods required.

Assessment criteria

The learner can:

- AC1.1 describe **methods of production**
- AC1.2 describe **printing methods**
- AC1.3 identify **pattern types**
- AC1.4 identify **paper types** and their characteristics
- AC1.5 describe appropriate locations for a range of **paper types**
- AC1.6 describe **methods for trimming paper types** and **tools and equipment** required
- AC1.7 describe the importance of accurate trimming when removing a selvedge
- AC1.8 describe **methods of jointing**, for **paper types** and **tools and equipment** required when hanging
- AC1.9 identify **international performance symbols**.

Range

Methods of production

Wet embossing, laminating, dry embossing, heat expansion, particles onto wet adhesive.

Printing methods

Block, screen, machine, wet, dry, embossing.

Pattern types

Set/straight match, drop/offset match, random/free match.

Paper types/wall coverings

Pulps, relief, washable, vinyl, duplex, simplex, wide width vinyls (fabric-backed vinyl, paper-backed vinyl), supadurables, glass fibre, foil damp, photo murals, metallics, flock, hessian, warps/weftless, lincrusta, hand-print, paper-backed fabrics

Methods for trimming

Pre-trimmed, remove selvedge.

Tools and equipment:

Metal straight edge and trimming knife, fabric-backed vinyl joint cutter, tape measure, folding rule, plumb bob, spirit level, paperhanging shears, sponges, paperhanging brush, rubber rollers, felt rollers, spatulas, seam roller, trimming knives, paste brush, access equipment, pencil, paste table, buckets, troughs, protective strip (plastic for paper backed wide-width vinyls, zinc), chalk and line.

Methods of jointing

Butt joint, overlap, cut.

International performance symbols

Spongeable, washable, super-washable, scrubbable, moderate light fastness, good light fastness, strippable, peelable, ready pasted, paste-the-wall, free match, straight match, offset match, design/distance repeat, direction of hanging, co-ordinated fabric available, reverse alternate lengths.

Learning outcome

The learner will:

LO2 Know how to select and prepare adhesives.

Assessment criteria

The learner can:

- AC2.1 state **papers** for which **adhesives** are suitable
- AC2.2 explain **advantages and disadvantages of adhesives**
- AC2.3 describe **factors** that may affect the consistency of adhesives
- AC2.4 describe how **defects** can occur due to incorrect consistency of adhesives.

Range

Papers/wallcoverings

Pulps, relief, (anaglypta) washable, vinyl, duplex, simplex, wide width vinyls (fabric-backed vinyl, paper-backed vinyl), supadurables, glass fibre, foil damp, photo murals, metallics, flock, hessian, warps/weftless, lincrusta, hand-print, paper-backed fabrics

Adhesives

Cellulose paste, starch paste, PVA, ready-mixed (heavy weight), proprietary (easy strip, light, medium, heavy), overlap, Lincrusta glue, foil damp

Advantages and disadvantages

Ease of application, adhesive properties, marking/staining, mould inhibitor.

Factors

Incorrect preparation, paper type, paper weight, room/air temperature, surface.

Defects

Blisters, delamination, stretching, tearing, lack of adhesion.

Learning outcome

The learner will:

LO3 Be able to select and prepare adhesives.

Assessment criteria

The learner can:

- AC3.1 select **adhesive** for work activity
- AC3.2 use adhesives in accordance with manufacturers' instructions
- AC3.3 prepare **adhesives** without lumps
- AC3.4 adjust consistency of **adhesives** to suit paper type
- AC3.5 follow current requirements of **health and safety and environmental regulations**.

Range

Adhesive (select appropriate)

Cellulose paste, starch paste, PVA, ready-mixed (heavy weight), proprietary (easy strip, light, medium, heavy), overlap, Lincrusta glue.

Health and safety and environmental regulations

Control of Substances Hazardous to Health (COSHH), Volatile Organic Compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, Personal Protective Equipment (PPE).

Learning outcome

The learner will:

LO4 Understand how to apply papers to ceilings, walls and complex surfaces.

Assessment criteria

The learner can:

- AC4.1 explain **factors** to be considered when planning
- AC4.2 explain the use of **papers** and **pattern type**
- AC4.3 describe why lining is advisable in different circumstances
- AC4.4 describe **girthing and area methods** for calculating the quantity of **paper** for different **pattern types**

- AC4.5 explain **factors** to consider when cutting papers
 - AC4.6 explain the reason for '**marking lines**'
 - AC4.7 describe the **faults** caused by careless pasting
 - AC4.8 describe how to rectify **faults** caused by careless pasting
 - AC4.9 explain the reasons for selecting concertina and end-to-end/lap folds, for horizontal and vertical lengths
 - AC4.10 describe reasons for using different **pasting methods** for different **papers**
 - AC4.11 explain which types of **cutting equipment** should be used for different types of papers
 - AC4.12 describe the process used for **hanging papers**
 - AC4.13 describe working practices relating to **health and safety issues**
 - AC4.14 explain the causes of the **defects** and how they can be prevented
 - AC4.15 state the implications of not maintaining the **paperhanging tools** in a clean and cared for condition.
-

Range

Factors (AC4.1)

Ceilings, walls, staircases, sloping ceiling/dormer window, free-standing column/pillar, ceiling of above average span alcove/niche/ arch, starting point, finishing point, centring, doors, window reveals, features/ obstacles, borders.

Papers/wallcoverings

Lining (two qualities), embossed, blown vinyl, standard (washable, vinyl), ready-pasted, borders, solvent-painted wall, excessive making good, type of finishing paper.

Pattern types

Bold patterns, fine print, chintz

Girthing and area methods

Standard widths, non-standard widths

Factors (AC4.5)

Pattern type (bold with prominent repeat, small or indefinite pattern), pattern match (set/straight, offset/drop), batches, wastage, shading/colour

Marking lines

Occasions: first drop on wall, after internal/external angle, over and around reveals

Position: horizontal, vertical method: spirit level, plumb bob

Considerations: access required, light source, room dimensions, economy.

Faults

Dry edges, blistering, delaminating, joint gapping, paste staining, polishing, sheen patches, staining, tearing.

Pasting methods

Pasting machine, brush, roller, ready pasted.

Cutting equipment:

Shears, knife and straight edge and casing wheel.

Hanging papers/wall coverings

Processes: practical hanging and trimming of patterned (set/straight match, drop match) papers and with borders to walls only with internal and external angles, sockets/switches/ceiling rose, window reveals.

Using: cutting methods (star cut and half star cut, mitres)

To: ceilings, walls, stairwells, sloping ceiling/dormer window, free-standing column/pillar, ceiling of above average span, alcove/niche/arch.

Health and safety issues

The work at height regulations, sharp blades, electrical safety, COSHH, disposal of waste.

Defects

Creasing, inaccurate angle cutting, loss of emboss, mould growth, overlapping, poor matching, shading, tearing.

Paper hanging tools

Tape measure, folding ruler, plumb bob, spirit level, paperhanging shears, sponges, paperhanging brush, trimming knives, caulker, pencil, spatulas, access equipment, paste brush, buckets, rubbish containers/bags, metal straight edge and trimming knife, chalk and line, troughs, paste table.

Learning outcome

The learner will:

LO5 Be able to apply papers to ceilings, walls and complex surfaces.

Assessment criteria

The learner can:

- AC5.1 plan the **position** of paper-hangings
- AC5.2 select, position and erect access equipment
- AC5.3 select **tools and equipment** to complete tasks
- AC5.4 calculate quantities of paper using both girthing and area methods
- AC5.5 measure and cut lengths with the minimum of waste
- AC5.6 plan, measure and mark starting lines, taking into account:
 - a. **occasions**
 - b. **position**
 - c. **methods**
 - d. **considerations**
- AC5.7 **paste** paper without misses, fold lengths and soak
- AC5.8 **apply papers** and pattern types with minimum **defects**
- AC5.9 cut papers neatly to the top, bottom and around obstacles, maintaining cleanliness
- AC5.10 follow current environmental and health and safety regulations.

Range

Position

Ceilings, walls, staircases, sloping ceiling/dormer window, free-standing column/pillar, ceiling of above average span alcove/niche/arch.

Tools and equipment

Tape measure, folding ruler, plumb bob, spirit level, paperhanging shears, sponges, paperhanging brush, trimming knives, caulker, pencil, spatulas, access equipment, paste brush, buckets, rubbish containers/bags, metal straight edge and trimming knife, chalk line, troughs, paste table.

Occasions

First drop on wall, after internal/external angle, over and around reveals.

Position

Horizontal, vertical.

Methods (select appropriate method)

Spirit level, plumb bob, laser level.

Considerations

Access required, light source, room dimensions, economy.

Paste

Factors: mixing, consistency, application sequence, faults (misses, excess paste, paste staining, discolouration), methods (pasting machine, brush, roller, ready pasted), folds (end-to-centre, concertina).

Apply papers/wall coverings

Processes: practical hanging and trimming of patterned (set/straight match, drop match) papers and with borders to walls only with internal and external angles, sockets/switches/ceiling rose, window reveals.

Using: cutting methods (star cut and half star cut, mitres)

To: ceilings, walls, stairwells, sloping ceiling/dormer window, free-standing column/pillar, ceiling of above average span, alcove/ niche/ arch

Defects

Creasing, overlaps, blisters, tears, delamination, polished edges, open joints, loose edges, irregular cutting, inaccurate matching, flattening of emboss, staining or surface marking, corners incorrectly negotiated, inaccurate plumbing.

Learning outcome

The learner will:

LO6 Understand how to hang wide-width vinyls.

Assessment criteria

The learner can:

- AC6.1 explain the reasons for checking the **suitability** of the surface in relation to the need to make good and prime, when hanging paper-backed and fabric-backed papers
- AC6.2 explain the implications and importance of each **stage** of the manufacturers' instructions
- AC6.3 state the maintenance and cleaning of wide-width vinyls

AC6.4 explain the causes of **defects** and how they can be prevented.

Range

Suitability

Make good and prime for hanging paper-backed and fabric backed papers.

Stage

Surface preparation, material type, internal angles, adhesive type and application method, directional hanging advice, process of cutting from rolls (descending order), use of full width material (no off-cuts or out-of-sequence drops), shading checks, use of spatula, jointing methods, health and safety advice.

Defects

Shading, springing joints, surface marking/staining.

Learning outcome

The learner will:

LO7 Be able to hang paper backed and fabric backed wide-width vinyls.

Assessment criteria

The learner can:

- AC7.1 check the **surface suitability**
 - AC7.2 plan the position of vinyls
 - AC7.3 select, position and erect appropriate **access equipment**
 - AC7.4 select **tools and equipment** appropriate to the task
 - AC7.5 calculate quantities of paper-backed and fabric-backed papers using both girthing and areas methods
 - AC7.6 plan, measure and mark starting lines, taking into account:
 - a. **occasions**
 - b. **position**
 - c. **methods**
 - d. **considerations**
 - AC7.7 follow **manufacturers' instructions** for hanging wide-width vinyls
 - AC7.8 cut paper neatly to obstacles, maintaining cleanliness
 - AC7.9 follow current **health and safety and environmental regulations**.
-

Range

Surface suitability

Rectify if required (prime and make good)

Tools and equipment

Metal straight edge and trimming knife, fabric-backed vinyl joint cutter, spatulas, sponges, access equipment, pencil, tape measure, folding rule, plumb bob, spirit level, plastic protective strip, paste tables, pasting roller/brush, rubbish, containers/bags, buckets.

Occasions

First drop on wall, after internal/external angle, over and around reveals.

Position

Horizontal, vertical.

Methods (select appropriate method)

Spirit level, plumb bob, laser level.

Considerations

Access required, light source, room dimensions, economy.

Manufacturers' instructions

Surface preparation, material type, internal angles, adhesive type and application method, directional hanging advice, process of cutting from rolls (descending order), use of full width material (no off-cuts/out-of-sequence drops), shading checks, use of spatula, jointing methods, health and safety advice.

Health and safety and environmental regulations

Electrical safety, sharp blades, COSHH, work at height regulations, disposal of waste.

Learning outcome

The learner will:

LO8 understand how to hang specialist papers.

Assessment criteria

The learner can:

- AC8.1 explain reasons for checking the **suitability of the surface** when hanging **specialist papers**
- AC8.2 compare **advantages and disadvantages** for specifying use of each **specialist paper**
- AC8.3 explain factors to be considered when planning
- AC8.4 describe girthing and area methods for calculating the quantity of paper for specialist papers
- AC8.5 explain **factors** to consider when cutting specialist papers
- AC8.6 describe how **careless pasting** can cause the faults in relation to the specialist paper, and their prevention and repair
- AC8.7 explain the implications and importance of each **stage** of the manufacturers' instructions for specialist papers
- AC8.8 explain **causes of defects** that occur with specialist papers and how they can be prevented
- AC8.9 explain the selection of **methods of trimming** for each of the **specialist papers**
- AC8.10 explain why trimming techniques for Lincrusta differ from techniques used for other specialist papers.

Range

Suitability of the surface

Make good, prime and line.

Specialist papers/wall coverings

Paper-backed fabric, Lincrusta, hand print, flock or other decorative specialist papers (eg warps/weftless, supadurables, hessian, metallics, glass fibre) etc.

Advantages and disadvantages

Decorative, cost, ease of application, textured, durability, cleaning, dampen sound

Factors

Starting point, finishing point, internal and external angles, doors, features and obstacles, window reveals, joints, walls.

Cutting considerations: batches, shading, pattern type, pattern match (set/straight, offset/drop), wastage

Careless pasting

Dry edges, blistering, delaminating, joint gapping, paste staining, polishing, staining, tearing process of cutting from rolls, directional hanging advice, jointing methods, internal angles, health and safety advice.

Stage

Surface preparation, material type, shading checks, adhesive type and application method.

Causes

Irregular cutting, inaccurate matching, under/over soaking, over brushing, overuse of seam roller, careless pasting

Defects

Loose edges, loose fibres, polished areas, delamination, blisters, tears, overlaps, open joints, flattening of emboss, staining/surface marking, corners incorrectly negotiated.

Methods of trimming

Knife and straight edge, shears, casing wheel, knife and self healing board.

Learning outcome

The learner will:

LO9 Be able to hang specialist papers.

Assessment criteria

The learner can:

AC9.1 check the **suitability of surface** for **specialist papers**

AC9.2 plan the **position** of **specialist papers**

AC9.3 select **tools and equipment** appropriate to the task

AC9.4 calculate quantities of specialist papers using both girthing and areas methods

- AC9.5 plan, measure and mark starting lines, taking into account:
- occasions**
 - position**
 - methods**
 - considerations**
- AC9.6 follow **manufacturers' instructions** for hanging specialist papers
- AC9.7 cut paper neatly to obstacles, maintaining cleanliness
- AC9.8 follow current requirements of **health and safety and environmental regulations**.
-

Range

Suitability of surface

Rectify (by making good, priming, lining if required)

Position

Walls, starting point, finishing point, internal and external angles, doors, features and obstacles, ceilings, window.

Specialist papers/wall coverings

Lincrusta, paper-backed fabric, hand print, flock, warps/weftless, supadurables, Suparglypta, hessian, metallics, glass fibre, photo mural.

Tools and equipment

Tape measure, metal straight edge, trimming knife, folding ruler, plumb bob, spirit level, paperhanging brush, paperhanging shears, sponges, rubber rollers, felt rollers, spatulas, seam roller, protective strip, access equipment, pencil, chalk and line, paste table, paste brush, buckets, cotton gloves, Ridgley straight edge and trimmer, rubbish containers/ bags.

Occasions

First drop on wall, after internal/external angle, over and around reveals.

Position

Horizontal, vertical.

Methods (select appropriate method)

Spirit level, plumb bob, laser level.

Considerations

Access required, light source, room dimensions, economy.

Manufacturers' instructions

Surface preparation, material type, shading checks, adhesive type and application method, process of cutting from rolls, directional hanging advice, jointing methods, internal angles, health and safety advice.

Health and safety and environmental regulations

Electrical safety, sharp blades, COSHH, work at height regulations, disposal of waste.

Learning outcome

The learner will:

LO10 Know how to store materials.

Assessment criteria

The learner can:

AC10.1 describe **factors** to consider when storing papers and adhesives

AC10.2 state reasons why a wall hanging may be supplied with a selvedge and the recommendation to store it 'on end'.

Range

Factors

Physical: racks, wrapping and dust.

Atmospheric: temperature, dampness and direct sunlight.

Learning outcome

The learner will:

LO11 Be able to store materials.

Assessment criteria

The learner can:

AC11.1 reclaim unused specialist, papers and range of adhesives

AC11.2 store specialist papers and range of adhesives.

Unit 312

Producing specialist finishes for painted decorative work

Level:	3
GLH:	64
Credit value:	7
Assessment type:	Multiple choice question paper Practical assignment
Aim:	The aim of this unit is to provide the learners with the skills and knowledge required for producing specialist finishes for painted decorative work.

Learning outcome

The learner will:

LO1 Be able to produce quality finish ground coats for painted decorative work.

Assessment criteria

The learner can:

- AC1.1 prepare **surfaces** to produce quality finish ground coats for painted decorative work using **abrasives** and **preparation processes**
- AC1.2 select **tools and equipment** to produce quality ground coat finishes
- AC1.3 prepare and apply **materials** to produce quality ground coat finishes to ensure no defects present
- AC1.4 follow current **environmental and relevant health and safety regulation**.

Range

Surfaces

Previously painted timber, previously painted plaster or plasterboard, embossed paper.

Abrasives

Silicon carbide, glass paper, aluminium oxide.

Preparation processes

Wet abrading, dry abrading, making good, spot priming.

Tools and equipment

Hair stipplers, rollers, rubbing blocks, buckets, sponges, dusting brush, paint brushes (natural bristle and synthetic filament), tack rags, stirrers, paint strainers, kettles.

Materials

Fillers

Water-borne primers/eggshell, solvent-borne primer/eggshell.

Environmental and relevant health and safety regulation

Control of Substances Hazardous to Health (COSHH), Volatile organic compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, personal protective equipment (PPE).

Learning outcome

The learner will:

LO2 Understand how to prepare multi-plate and apply stencils.

Assessment criteria

The learner can:

- AC2.1 explain differences between different multi-plates **stencil types**
- AC2.2 describe **methods** used for enlarging and reducing multi-plate stencils
- AC2.3 explain advantages and disadvantages of **plate materials**
- AC2.4 describe **methods** used for transferring designs
- AC2.5 compare advantages and disadvantages of cutting with craft knives and hot knives
- AC2.6 describe the suitability of **base materials** used for cutting multi-plate stencils
- AC2.7 explain **factors** to take into consideration when cutting stencils
- AC2.8 explain **planning considerations** when setting out and applying stencils to wall areas
- AC2.9 explain the purpose of **lines** and registration marks to mark out areas to be stenciled
- AC2.10 describe advantages and disadvantages of **methods** used for securing stencils to prevent **application faults**
- AC2.11 explain cleaning, maintenance and storage requirements for **tools and equipment**.

Range

Stencil types

Positive, negative, multi-plate.

Enlarging and reducing methods

Accurate measurement, grid, illuminated projection, photocopy, print.

Plate materials

Treated paper, treated card, proprietary stencil card, acetate sheet.

Transferring methods

Trace, pounce and photocopy – onto the stencil plate materials of paper and proprietary stencil card and acetate.

Base materials

Glass plate, proprietary cutting mat.

Factors

Cleanliness, hand position, knife angle, direction of cutting, blade sharpness, repair of broken ties, size and sequence of pattern (small areas and vertical lines first), free movement of stencil plate, margin widths.

Planning considerations

Location of doors, windows, corners, access requirements, room dimensions, stencil size, number of repeats/connections spacing, order of application.

Lines

Chalk: centre/horizontal/vertical.

Securing methods

Proprietary spray adhesive, tape (masking, low-tack).

Application faults

Creep, smudging, paint lifting, uneven colour, bittiness, undue texture, uneven weight of colour over repeats, buckled/curled stencil plate.

Tools and equipment

Ruler/tape measure, pencil, chalk and line, stencil knife/craft knife, hot knife, palette, stencil brushes.

Learning outcome

The learner will:

LO3 Be able to prepare and apply multi- plates.

Assessment criteria

The learner can:

- AC3.1 produce stencil designs and use appropriate **transfer methods** to **stencil plate material**
- AC3.2 prepare **multi-plate stencil materials**
- AC3.3 select **tools and equipment**
- AC3.4 cut out multi-plate stencil types from **plate materials** with accurate and clean cut design outlines and strong ties
- AC3.5 set and mark out stencil locations for linear runs, borders and walls, demonstrating **planning considerations**
- AC3.6 apply multi-plate stencil types with sharp outlines, as accurate linear work
- AC3.7 clean, maintain and store **tools and equipment**
- AC3.8 follow current **health and safety and environmental regulations**.

Range

Transfer methods

Select two of the following:

- trace
- pounce
- photocopy.

Stencil plate materials

Select two of the following:

- treated paper
- treated card
- proprietary stencil card
- acetate sheet.

Tools and equipment

Pencil, ruler/tape measure, chalk and line, stencil knife/craft knife, palette, stencil brushes, hot knife.

Planning considerations

Number of repeats/ connections, location of doors, windows, corners, access requirements, room dimensions, stencil size, spacing.

Health and safety and environmental regulations

Control of Substances Hazardous to Health (COSHH), Volatile organic compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, personal protective equipment (PPE).

Learning outcome

The learner will:

LO4 Understand how to replicate different types of wood using graining methods.

Assessment criteria

The learner can:

- AC4.1 explain the importance of ensuring that the appropriate ground coat colour is used
- AC4.2 outline reasons for selecting **colourants** to produce the scumble for different **graining effects**
- AC4.3 explain methods by which oil based glazes and acrylic glazes dry
- AC4.4 describe **brushes, tools and equipment** used to produce replica **graining effects**
- AC4.5 explain the **graining effects** produced by different **brushes, tools and equipment**
- AC4.6 describe cleaning, maintenance and storage requirements for **tools and brushes**
- AC4.7 describe how specific cuts in wood dictate the grain pattern
- AC4.8 explain **processes** in relation to each wood effects
- AC4.9 describe the graining sequence for **structural components**
- AC4.10 explain the importance of cleanliness and sharpness when graining.

Range

Colourant

Artist's oil, acrylics, gouache, powder pigment, universal strainers.

Graining effects

Straight grain: oak, mahogany, one other wood type; figure work graining: oak and mahogany.

Oil-based scumbles

Solvent borne glaze, oil colourant, oil graining colour/medium solvent borne proprietary scumble binders (fullers earth /whiting, stale beer, vinegar) varnish, white spirit, linseed oil, driers, glycerine.

Water-borne scumbles

Acrylic glaze, acrylic colourants, dry pigments, water fullers earth/whiting stale beer, vinegar) varnish, glycerine, retarding agents.

Tools and equipment

Metal/rubber/card combs, check/tick roller, natural sponges, feathers eg goose-wing, lint-free rag, palette knives, palettes, kettles, plastic pots.

Brushes

'Rubbing in' brushes, mixing brushes, fitches, floggers and dragging brushes, softeners (hog's hair, badger), sable pencils and writers, varnish brushes.

Processes

Rubbing in, flogging, combing, softening overgraining, mottling, wiping out, heartwood or painting in heartwood, combing with painting in.

Structural components

Panelled doors, windows, dado rails, narrow linear runs (i.e. architraves and skirtings), small wall panels.

Learning outcome

The learner will:

LO5 Be able to replicate different types of wood using graining methods.

Assessment criteria

The learner can:

- AC5.1 check **factors** relating to ground coat suitability, and rectify if required
- AC5.2 select **colourant** appropriate to each **replica graining** type
- AC5.3 prepare **graining materials**
- AC5.4 select **brushes, tools and equipment** to be used to produce replica graining
- AC5.5 produce **replica graining** for **structural components** using **processes**
- AC5.6 clean, maintain and store **brushes, tools, and equipment**
- AC5.7 follow current health and safety and environmental regulations.

Range

Factors

No visible coating defects (misses, ropiness, bits and nibs, undue texture), colour, finish (eggshell, mid- sheen).

Colourant

Artist's oil, acrylics, gouache, powder pigment, universal strainers.

Replica graining

Straight grain – oak, mahogany, one other timber type, figure work graining – oak and mahogany.

Graining materials

Solvent-borne glaze, water borne glaze, oil colourant, glue size, white spirit, linseed oil, solvent-borne proprietary scumbles, binders (fuller's earth/whiting, stale beer, vinegar), oil graining colour/medium, water graining colour/medium, acrylic colourant.

Brushes

Rubbing in brushes, mixing brushes, overgrainers, sable pencils/writers, fitches, mottlers/cutters, floggers/dragging brushes, softeners (hog's hair, badger) sable pencils and writers, varnish brushes.

Tools

Metal/rubber/card combs, check/tick roller, veining horn, natural sponges, crayons.

Equipment

Lint-free rag, palette knives, palettes, kettles, plastic pots.

Structural components

Select three of the following:

- panelled doors
- windows
- dado rails
- narrow linear runs (ie architraves and skirtings)
- small wall panels

Processes

Rubbing in, flogging, combing, softening, overgraining, mottling, wiping out heartwood and painting in heartwood, combing with painting in and apply protective finishing coats

Learning outcome

The learner will:

LO6 Understand how to replicate marble.

Assessment criteria

The learner can:

AC6.1 state how veins in marble are naturally formed

AC6.2 state the appropriate British Standard 4800 colour for ground coats to **replicate marble**

- AC6.3 state the appropriate **pigment colours** to **replicate marble**
- AC6.4 describe **brushes, tools and equipment** required to produce replicate marble effects
- AC6.5 explain the effects produced by different **brushes, tools and equipment**
- AC6.6 describe **terminology** relating to marbling
- AC6.7 describe cleaning, maintenance and storage requirements for **brushes, tools and equipment**.
-

Range

Replicate marble

Carrara, Sienna, vert de mer, Black and Gold, Rouge Royale, St.Anne, Breche Violet.

Pigment colours

White, black, ultramarine blue, ochre, umber (raw, burnt), sienna (raw, burnt), chrome, Indian red, Brunswick green, Prussian blue, paynes grey.

Brushes, tools and equipment

Brushes: Rubbing in mixing, varnish, floggers/ dragging, softeners (hog's hair, badger), sable pencils/writer, fitches.

Tools: Feathers, (ie goose-wing) natural sponges.

Equipment: Lint-free rag, palette knives, palettes, kettles, plastic pots, dippers, chalk and line, masking tape, paper.

Terminology

Medium, gilp, clouding or scumbling, wash (of colour) transparency.

Learning outcome

The learner will:

LO7 Be able to replicate marble.

Assessment criteria

The learner can:

- AC7.1 check **factors** relating to ground coat suitability and rectify if required
- AC7.2 select pigment colours appropriate to **replicate marble**
- AC7.3 prepare **marbling materials**
- AC7.4 select **brushes, tools and equipment**
- AC7.5 produce **replica marble** using appropriate **processes**
- AC7.6 apply protective finishing coats
- AC7.7 clean, maintain and store **brushes, tools and equipment**
- AC7.8 follow current **health and safety and environmental regulations**.
-

Range

Factors

No visible coating defects (misses, ropiness, bits and nibs, undue texture), colour, finish (eggshell, mid- sheen).

Replica marble

Carrara, Sienna, Vert De Mer, Black and Gold, Rouge Royale, St.Anne, Breche Violet.

Marbling materials

Solvent-borne glaze and water-borne glaze, oil colourant and acrylic colourant, varnish (water-borne and solvent-borne), white spirit, linseed oil, crayons.

Brushes, tools and equipment

Brushes: rubbing in mixing, varnish softeners (hog's hair, badger), sable pencils/writer, fitches.

Tools: feathers, (ie goose-wing) natural sponges.

Equipment: lint-free rag, palette knives, palettes, kettle's, plastic pots, dippers, chalk and line, masking tape, paper.

Processes

Oil-in and rubbing in, veining, softening, glazing, cissing and opening out, stippling, wiping out.

Health and Safety and Environmental Regulations

Control of Substances Hazardous to Health (COSHH), Volatile organic compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, personal protective equipment (PPE).

Learning outcome

The learner will:

LO8 Understand how to apply metal leaf.

Assessment criteria

The learner can:

- AC8.1 explain **factors** relating to surface conditions suitability to receive gilding
- AC8.2 explain the importance of establishing the correct drying stages
- AC8.3 explain **processes** used to apply metal leaf
- AC8.4 state types of **damage** that may be caused by **processes** and how they may be prevented
- AC8.5 describe the importance of correct cleaning and storage of camel hair mops, pounce bags and specialist tools.

Range

Factors

Smooth, defect free, clean, hard, dry

Processes

Tack time testing, metal leaf application, skewing, faulting, burnishing, cleaning off, backing up.

Damage

Lack of adhesion, shrivelling, flaking, tarnishing.

Learning outcome

The learner will:

LO9 Be able to apply metal leaf.

Assessment criteria

The learner can:

- AC9.1 check **factors** relating to surfaces suitability and rectify if required
- AC9.2 select **tools** to apply metal leaf
- AC9.3 prepare and apply **barrier coat materials** evenly and without misses
- AC9.4 select and apply **mordants** to ensure the required finish, regularly checking for correct drying stage
- AC9.5 apply metal leaf to flat and detailed areas
- AC9.6 remove barrier coats from finished work, where applicable
- AC9.7 burnish applied metal leaf
- AC9.8 clean, maintain and store tools and equipment
- AC9.9 follow current **health and safety and environmental regulations**.

Range

Factors

Smooth, defect free clean, hard, dry surfaces: painted, varnished, glass.

Tools

Camel hair mops, pounce bags, specialist.

Barrier coat materials

Egg glair (egg white, warm water), French chalk.

Mordants

Glare, gelatine, gold size.

Health and Safety and Environmental Regulations

Control of Substances Hazardous to Health (COSHH), Volatile organic compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, personal protective equipment (PPE).

Unit 313

Producing specialist architectural finishes for decorative work

Level:	3
GLH:	45
Credit value:	5
Assessment type:	Multiple choice question paper Practical assignment
Aim:	To provide the learner with the skills and knowledge required to produce specialist architectural finishes for decorative work.

Learning outcome

The learner will:

LO1 Understand how to set out and install centre-pieces.

Assessment criteria

The learner can:

- AC1.1 explain **health and safety risks and precautions** associated with the installation of centre-pieces
- AC1.2 explain **factors** to consider when selecting designs and materials for a centre-piece
- AC1.3 state **adhesives** for **centre-piece types**
- AC1.4 explain **stages** for setting out and installing centre-pieces
- AC1.5 state reasons for having registration marks on the ceiling and centre-pieces
- AC1.6 explain the process for achieving registration marks
- AC1.7 identify **suitable fixings** for centre-pieces
- AC1.8 explain reasons for **moistening** the surface prior to applying centre-pieces.

Range

Health and safety risks and precautions

Electricity, power tools, working at height, manual handling, working above head, sharp tools.

Factors

Architectural, design, weight, size, labour requirements.

Adhesives

Ready mix, powder based.

Centre piece type

Polyurethane foam centre-pieces: PVA

Gypsum plaster centre-pieces: proprietary, heavy duty, stucco.

Stages

- erect access equipment, dry locate, fix location pins
- set out and mark out position for centre-piece, drill holes in centre-piece for fixing, registration marks on centre-piece and surface
- secure to surface: drill and fit wall plugs, prepare adhesive
- mark and cut out for cabling, apply adhesive to centre-piece, moisten area to receive centre-piece
- apply centre-piece to surface, make good gaps and fixing holes.

Suitable fixings

Nails, wall plugs, brass screws.

Moistening

Reduce porosity of surface, allow slip.

Learning outcome

The learner will:

LO2 Be able to set out and install centre pieces.

Assessment criteria

The learner can:

- AC2.1 select **materials, tools and equipment** for setting out and installing centre pieces
- AC2.2 erect and check **access equipment**
- AC2.3 set out area to receive centre-piece
- AC2.4 cut access holes for cabling
- AC2.5 install centre-piece to the ceiling following the **stages of work**
- AC2.6 follow **current environmental and health and safety regulations**.

Range

Materials

Polyurethane foam centre-pieces, PVA

Gypsum plaster centre-pieces, adhesives (proprietary, heavy duty, stucco).

Tools and equipment

Access equipment, tape measure, pencil, drill, saw, hammer, screwdriver, stirring stick, buckets, sponges, brushes, plastic pots.

Access equipment

Ladders, step ladders, platform steps, trestle platforms, podiums.

Stages of work

- Erect access equipment, dry locate, fix location pins

- Set out and mark out position for centre-piece, drill holes in centre-piece for fixing, registration marks on centre-piece and surface
- Secure to surface, drill and fit wall plugs, prepare adhesive
- Mark and cut out for cabling, apply adhesive to centre-piece, moisten area to receive centre-piece
- Apply centre-piece to surface, make good gaps and fixing holes.

Environmental and health and safety regulations

Control of Substances Hazardous to Health (COSHH), Volatile Organic Compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, Personal Protective Equipment (PPE).

Learning outcome

The learner will:

LO3 Understand how to set out and install coving.

Assessment criteria

The learner can:

- AC3.1 explain **health and safety risks** and required precautions associated with the installation of coving
- AC3.2 state **materials** used for manufacture of polyurethane foam and gypsum plaster coving
- AC3.3 explain **tools and equipment** required to install coving
- AC3.4 state advantages and disadvantages for using mitre blocks and templates
- AC3.5 explain **considerations** when installing coving and cornices with complex designs
- AC3.6 state **adhesives** for coving types
- AC3.7 state implications of an adhesive's viscosity when applying it to coving, and once installed
- AC3.8 explain benefits in relation to both temporary and permanent fixing, when installing coving
- AC3.9 explain the stages for setting out and installing coving
- AC3.10 state advantages of leaving a 2-3mm gap
- AC3.11 state the sequence of installing coving for a chimney breast wall.

Range

Health and safety risks

Working at height, manual handling, working above head, sharp tools, dust particles.

Materials

Polyurethane foam, gypsum plaster, weight, support, accurate location, remove excess adhesive, install temporary additional support nails, make good gaps and fixing holes, remove support nails, leave to set.

Tools and equipment

Access equipment, tape measure, pencil, chalk line, galvanised nails, hammer, mitre block, template, saw, stirring stick, buckets, sponges, brushes, plastic pots.

Considerations

Even pattern distribution, centre around features, calculate joint locations, making good.

Adhesives

Ready mix, powder based.

Learning outcome

The learner will:

LO4 Be able to set out and install coving.

Assessment criteria

The learner can:

- AC4.1 select coving, **tools and equipment** appropriate for the work
- AC4.2 check and erect **access equipment**
- AC4.3 set out area to receive coving
- AC4.4 measure and cut lengths of coving for internal and external angles and butt joints
- AC4.5 install **coving**
- AC4.6 follow current **environmental and health and safety regulations**.

Range

Tools and equipment

Access equipment, tape measure, pencil, chalk line, galvanised nails, hammer, mitre block, template, saw, stirring stick, buckets, sponges, brushes, plastic pots.

Access equipment

Ladders, step ladders, platform steps, trestle platforms, podiums.

Coving

To include internal and external angles and butt joints.

Environmental and health and safety regulations

Control of Substances Hazardous to Health (COSHH), Volatile Organic Compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, Personal Protective Equipment (PPE).

Unit 314

Applying water-borne paint systems using airless equipment

Level:	3
GLH:	60
Credit value:	7
Assessment type:	Multiple choice question paper Practical assignment
Aim:	To provide the learner with the skills and knowledge required to apply water-borne paint systems using airless equipment.

Learning outcome

The learner will:

- LO1 Understand how to prepare work areas by protecting adjacent surfaces, furniture and fittings.

Assessment criteria

The learner can:

- AC1.1 explain **domestic** and **commercial factors** to consider, when preparing the work area
- AC1.2 identify types and uses of **masking tapes**
- AC1.3 explain the **procedure** for applying and removing masking tapes
- AC1.4 identify types and uses of **protective sheeting**
- AC1.5 explain maintenance and storage requirements for **protective sheeting** types.

Range

Domestic factors

Door and window furniture, wall-mounted fixtures and fittings, air quality within the work area, room furniture, floor coverings.

Commercial factors

Workstations, lighting, machinery, equipment, furniture, public access to premises, climate/weather, temperature, air quality within the work area, ventilation, debris.

Masking tapes

Exterior, interior, low tack, crepe, 7-day.

Procedure

Continuous masking by overlapping each previously applied strip, starting at first area to be sprayed.

Protective sheeting

Dust sheets (lightweight, protective backing, heavy duty), polythene sheets, tarpaulin, drop sheets.

Learning outcome

The learner will:

LO2 be able to prepare work areas by protecting adjacent surfaces, furniture and fittings.

Assessment criteria

The learner can:

- AC2.1 prepare work areas ready for spray painting
- AC2.2 select **protective materials** and equipment to protect adjacent surfaces, furniture and fittings
- AC2.3 position and fix **protective materials**
- AC2.4 set up adequate Local Extract Ventilation (LEV) and natural ventilation for work area.

Range

Protective materials

Masking paper, masking machine, masking shield, dust sheets (lightweight, protective backing, heavy duty), self-adhesive, masking paper, drop sheets, polythene sheets, tarpaulin.

Learning outcome

The learner will:

LO3 Understand how to select components and produce a working airless spray unit.

Assessment criteria

The learner can:

- AC3.1 explain why airless system would be selected in preference to a High Volume Low Pressure HVLP system
- AC3.2 explain the advantages and disadvantages of using airless equipment
- AC3.3 state the function of each of airless equipment **component**
- AC3.4 explain the assembly sequence of component parts to produce a working unit
- AC3.5 explain the adjustment procedures to ensure correct spray application
- AC3.6 state the function of the **ancillary components**
- AC3.7 state **health and safety issues** when working with airless systems.

Range

Component

Fluid pumps (electrically driven or pneumatically driven), pump filters, gravity feed hopper and filter, suction feed tube and filter, fluid line, whip-end (where applicable), gun, gun in-line filter, trigger locking device, trigger guard, fluid tips, tip safety guard.

Ancillary components

Extension pole, pole gun, swivel head fluid tip, roller frame, roller sleeve.

Health and safety issues

Personal Protective Equipment (PPE), Respiratory Protective Equipment (RPE), Health and Safety at Work Act, inhalation (of overspray), eye irritation, ingestion, COSHH regulations.

Learning outcome

The learner will:

LO4 Be able to select components and produce a working airless spray unit.

Assessment criteria

The learner can:

- AC4.1 select **component parts** for the spray system type for spray application
- AC4.2 assemble **component parts** to produce a working airless unit
- AC4.3 load paint material used in an airless spray unit
- AC4.4 test and adjust airless spray unit for correct application.

Range

Component parts

Fluid pumps (electrically driven or pneumatically driven), pump filters, gravity feed hopper and filter, suction feed tube and filter, fluid line, whip-end (where applicable), gun, gun in-line filter, trigger locking device, trigger guard, fluid tips, tip safety guard.

Learning outcome

The learner will:

LO5 Understand how to apply water-borne coatings by airless spray.

Assessment criteria

The learner can:

- AC5.1 explain the importance of correct material viscosity and how to adjust and check **airless equipment** in relation to temperature
- AC5.2 explain the importance of maintaining viscosity of batches

- AC5.3 explain problems which may arise from using unstrained paint
 - AC5.4 explain the importance of using **application techniques** correctly
 - AC5.5 explain the terms Wet Film Thickness (WFT) and Dry Film Thickness (DFT) and how they affect surface protection
 - AC5.6 explain the effects of temperature, humidity and ventilation on the viscosity and drying process of surface coatings
 - AC5.7 identify the appropriate PPE and RPE for applying paint by airless spray.
-

Range

Application techniques

Distance adjustment, speed of movement, parallel movement, triggering, internal corners, pipework, external corners (stripe coat), other surface obstructions.

Airless equipment

Viscometer (Ford Cup), ratio stick.

Learning outcome

The learner will:

- LO6 Be able to prepare and apply water-borne coatings by airless spray.

Assessment criteria

The learner can:

- AC6.1 prepare **paint materials** by using viscometer (ford cup) and ratio stick to establish appropriate viscosity
 - AC6.2 select **equipment** required to apply surface coatings
 - AC6.3 apply paint to **surface areas** using airless system without **defects**
 - AC6.4 use correct **application techniques** when applying coatings by airless spray
 - AC6.5 demonstrate safe temporary shutdown procedures to make adjustments for spraying
 - AC6.6 check for Wet Film Thickness (WFT) where appropriate
 - AC6.7 follow current **environmental and health and safety regulations**.
-

Range

Paint materials

Using viscometer (Ford Cup) and ratio stick.

Equipment

Loaded and ready to use airless system, Wet Film Thickness (WFT) gauge, Dry Film Thickness (DFT) gauge, masking shield, PPE/RPE.

Surface coatings

Water-borne (for interior and exterior use): paints, stains, preservatives and varnishes.

Defects

Runs, sags, dry spray, banding, overspray, orange peel.

Application techniques

Distance adjustment, speed of movement, parallel movement, triggering, stripe coating (external corners)

Environmental and health and safety regulations

Personal Protective Equipment (PPE), Respiratory Protective Equipment (RPE), Health and Safety at Work Act, inhalation (of overspray), eye irritation, ingestion, COSHH regulations.

Learning outcome

The learner will:

LO7 Know how to rectify faults in spray equipment and defects in applied coatings.

Assessment criteria

The learner can:

AC7.1 explain **equipment faults** and correction and prevention procedures

AC7.2 explain **material faults** and correction and prevention procedures

AC7.3 explain the causes and remedies of the **defects** in applied coatings

AC7.4 define **terminology** in relation to spray.

Range

Equipment faults

Electrical failure, dirty air cap, needle packing, loose, damaged or worn fluid tip or needle, incorrect set-up (fluid tip), fluttering, defective spray patterns, fluid leakage, kinked hoses, spluttering.

Material faults

Contamination, incorrect viscosity.

Defects

Runs, sags, dry spray, banding, overspray, orange peel.

Terminology

Litres per minute, PSI, triggering, arcing, overlapping, spray distance, gun set-up.

Learning outcome

The learner will:

LO8 Be able to rectify equipment faults using rectification procedures.

Assessment criteria

The learner can:

AC8.1 rectify **equipment faults** using **rectification procedures**

AC8.2 rectify **material faults** using **rectification procedures**

AC8.3 adjust application techniques to ensure a good quality finish.

Range

Equipment faults

Electrical failure, needle packing, loose damaged or worn fluid tip or needle, incorrect set-up (fluid tip), fluttering, defective spray patterns, fluid leakage, kinked hoses, spluttering.

Rectification procedures

Shutdown, dismantle, clean, replace, reassemble, set up the system, adjust the system.

Material faults

Contamination, incorrect viscosity.

Learning outcome

The learner will:

LO9 Know how to clean, maintain and store airless spray equipment and materials.

Assessment criteria

The learner can:

AC9.1 state the **safety factors** to be observed when operating shutdown procedures

AC9.2 state the correct sequence for cleaning and flushing the airless system be used

AC9.3 state the requirements for the maintenance and storage of spray equipment

AC9.4 state the appropriate **legislation** sources relating to waste disposal.

Range

Safety factors

Shut down system, remove container, empty container, flush out container with appropriate thinner, recharge with appropriate thinner, reconnect and restart system, spray through gun to flush, shut down, repeat procedure until flushing thinner is clean, shut down system, disassemble component, clean and dry components, lubricate where required, reassemble, store.

Legislation

Health and Safety at Work Act, Environmental Protection Agency (EPA), COSHH, HSE

Learning outcome

The learner will:

LO10 Be able to clean, maintain and store airless spray equipment and materials.

Assessment criteria

The learner can:

AC10.1 shut down **spray equipment** safely for cleaning

AC10.2 empty containers and dispose of **materials**

AC10.3 clean interior and exterior surfaces ready for storage

AC10.4 lubricate component parts

AC10.5 store spray equipment

AC10.6 follow current **environmental and relevant health and safety regulations**.

Range

Spray equipment

Gravity feed, suction feed, pressure feed.

Materials

Water-borne coatings, solvent, rags, lubricants.

Environmental and relevant health and safety regulations

Control of Substances Hazardous to Health (COSHH), Volatile Organic Compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, Personal Protective Equipment (PPE).

Unit 331

Applying water-borne paint systems using High Volume Low Pressure (HVLP) spray equipment

Level:	3
GLH:	60
Credit value:	7
Assessment type:	Multiple choice question paper Practical assignment
Aim:	To provide the learner with the skills and knowledge required to apply water-borne paint systems using High Volume Low Pressure (HVLP) spray equipment

Learning outcome

The learner will:

- LO1 Understand how to prepare work areas by protecting adjacent surfaces, furniture and fitting using High Volume Low-Pressure spray equipment (HVLP).

Assessment criteria

The learner can:

- AC1.1 explain **factors** to consider, when preparing the work area
- AC1.2 identify types and uses of **masking tapes**
- AC1.3 explain **procedures** for applying and removing masking tapes
- AC1.4 identify types and uses of **protective sheeting**
- AC1.5 explain maintenance and storage requirements for **protective sheeting** types.

Range

Factors

Domestic: door and window furniture, wall-mounted fixtures and fittings, air quality within the work area, room furniture, floor coverings.

Commercial: workstations, lighting, machinery, equipment, furniture, public access to premises, climate/weather, temperature, air quality within the work area, ventilation, debris.

Masking tapes

Exterior, interior, low tack, crepe, 7-day.

Procedure

Continuous masking by overlapping each previously applied strip, starting at first area to be sprayed.

Protective sheeting

Dust sheets (lightweight, protective backing, heavy duty), polythene sheets, tarpaulin, drop sheets.

Learning outcome

The learner will:

- LO2 Be able to prepare work and surrounding areas prior to painting using HVLP spray equipment.

Assessment criteria

The learner can:

- AC2.1 prepare work areas ready for spray painting
- AC2.2 select **protective materials** and equipment to protect adjacent surfaces, furniture and fittings
- AC2.3 position and fix **protective materials**
- AC2.4 set up adequate Local Extract Ventilation (LEV) and natural ventilation for work area.

Range

Protective materials

Masking paper, masking machine, masking shield, dust sheets (lightweight, protective backing, heavy duty), self-adhesive, masking paper, drop sheets, polythene sheets, tarpaulin.

Learning outcome

The learner will:

- LO3 Understand how to set up HVLP spray equipment to prepare materials for spray application.

Assessment criteria

The learner can:

- AC3.1 justify reasons for choosing **spray system types**
- AC3.2 explain the advantages and disadvantages of using HVLP spray gun equipment
- AC3.3 explain the function of the **HVLP spray gun equipment components**
- AC3.4 explain the function of **pressure pot components**
- AC3.5 explain the function of **components parts**
- AC3.6 explain the assembly sequence of **component parts** to produce a working unit
- AC3.7 explain the adjustment procedures to ensure correct spray application
- AC3.8 explain why an air pressure check at the nozzle is required
- AC3.9 explain **health and safety issues** when working with HVLP systems.

Range

Spray systems types

Air spray High Volume Low Pressure (HVLP) gravity feed, suction feed, pressure feed.

HVLP spray gun equipment components

Spray gun body, air inlet connector, air valve, trigger, air baffle, air cap, fluid needle, fluid tip, fluid needle packing, spreader control valve (where appropriate), fluid needle adjuster.

Pressure pot components

Container, lid, clamps, seal, air inlet valve, pressure regulator, pressure gauge, safety valve, fluid delivery tube, fluid outlet valve (where applicable).

Component parts

Spray guns, air hoses, compressor, pressure pot, transformer

Health and safety issues

Personal Protective Equipment (PPE), Respiratory Protective Equipment (RPE), Health and Safety at Work Act, inhalation (of overspray), eye irritation, ingestion, COSHH regulations.

Learning outcome

The learner will:

LO4 Be able to apply water-borne coatings by HVLP spray.

Assessment criteria

The learner can:

- AC4.1 prepare paint materials by using viscometer (Ford cup) and ratio stick to establish appropriate viscosity
- AC4.2 prepare paint materials by straining
- AC4.3 select **equipment** required to apply **surface coatings**
- AC4.4 set up the HVLP system to apply **surface coatings** without **defects**
- AC4.5 use correct **application techniques** when applying water-borne coatings by HVLP spray
- AC4.6 demonstrate safe temporary shutdown procedures to make adjustments for spraying
- AC4.7 check for Wet Film Thickness (WFT) where appropriate
- AC4.8 follow current **environmental and health and safety regulations**.

Range

Equipment

Loaded and ready to use HVLP system, Wet Film Thickness (WFT) gauge, Dry Film Thickness (DFT) gauge, masking shield, PPE/RPE.

Surface coatings

Water-borne: paints, stains, preservatives and varnishes, interior and exterior use.

Defects

Runs, sags, dry spray, banding, overspray, orange peel.

Application techniques

Distance adjustment, speed of movement, parallel movement, triggering, stripe coating (external corners)

Environmental and relevant health and safety regulations

Control of Substances Hazardous to Health (COSHH), Volatile Organic Compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, Personal Protective Equipment (PPE).

Learning outcome

The learner will:

LO5 Understand how to rectify faults in spray equipment and defects in applied coatings.

Assessment criteria

The learner can:

- AC5.1 explain **equipment faults** and correction and prevention procedures
- AC5.2 explain **material faults** of contamination and incorrect correction and prevention procedures
- AC5.3 explain the causes and remedies of the **defects** in applied coatings
- AC5.4 define **terminology** in relation to spray.

Range

Equipment faults

electrical failure, dirty air cap, needle packing, loose, damaged or worn fluid tip or needle, incorrect set-up (fluid tip), fluttering, defective spray patterns, fluid leakage, kinked hoses, spluttering.

Material faults

Contamination, incorrect viscosity.

Defects

Runs, sags, dry spray, banding, overspray, orange peel.

Terminology

Litres per minute, PSI, triggering, arcing, overlapping, spray distance, gun set-up.

Learning outcome

The learner will:

LO6 Be able to rectify faults in spray equipment and defects in applied coatings.

Assessment criteria

The learner can:

AC6.1 rectify **equipment faults** using **rectification procedures**

AC6.2 rectify **material faults** using **rectification procedures**

AC6.3 adjust application techniques to ensure that good quality finish.

Range

Equipment faults

Electrical failure, dirty air cap, needle packing, loose damaged or worn fluid tip or needle, incorrect set-up (fluid tip), fluttering, defective spray patterns, fluid leakage, kinked hoses, spluttering.

Rectification procedures

Shutdown, dismantle, clean, replace, reassemble, set up the system, adjust the system.

Material faults

Contamination, incorrect viscosity.

Learning outcome

The learner will:

LO7 Know how to clean, maintain and store HVLP spray equipment and materials.

Assessment criteria

The learner can:

AC7.1 state the safety factors to be observed when operating shutdown procedures

AC7.2 state the correct sequence for **cleaning and flushing** the HVLP system used

AC7.3 state the requirements for the maintenance and storage of spray equipment

AC7.4 state appropriate **legislation** sources relating to waste disposal.

Range

Cleaning and flushing

Shut down system, remove container, empty container, flush out container with appropriate thinner, recharge with appropriate thinner, reconnect and restart system, spray through gun to flush, shut down, repeat procedure until flushing thinner is clean, shut down system, disassemble component, clean and dry components, lubricate where required, reassemble, store.

Legislation

Health and Safety at Work Act, Environment Agency, COSHH, HSE.

Learning outcome

The learner will:

LO8 Be able to clean, maintain and store HVLP spray equipment and materials.

Assessment criteria

The learner can:

- AC8.1 shut down the **spray equipment** safely for cleaning
- AC8.2 empty containers and dispose of **materials**
- AC8.3 clean interior and exterior surfaces ready for storage
- AC8.4 lubricate component parts
- AC8.5 store spray equipment
- AC8.6 follow current **environmental and relevant health and safety regulations**.

Range

Spray equipment

Gravity feed, suction feed, pressure feed.

Materials

Water-borne coatings, solvent, rags, lubricants.

Environmental and relevant health and safety regulations

Control of Substances Hazardous to Health (COSHH), Volatile Organic Compounds (VOCs), disposal of waste, cuts and abrasions, dermatitis, dust inhalation, burns, electrical safety, work at heights regulations, risk assessment, Personal Protective Equipment (PPE).

Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the [Centre document library](http://www.cityandguilds.com) on www.cityandguilds.com or click on the links below:

Centre Handbook: Quality Assurance Standards

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on:

- centre quality assurance criteria and monitoring activities
- administration and assessment systems
- centre-facing support teams at City & Guilds/ILM
- centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the centre contract.

Centre Assessment: Quality Assurance Standards

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre-assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre assessments.

Access arrangements: When and how applications need to be made to City & Guilds

provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The [Centre document library](http://www.cityandguilds.com) also contains useful information on such things as:

- conducting examinations
- registering learners
- appeals and malpractice.

Useful contacts

Please visit the [Contact us](http://www.cityandguilds.com) section of the City & Guilds website.

City & Guilds

For over 140 years, we have worked with people, organisations and economies to help them identify and develop the skills they need to thrive. We understand the life-changing link between skills development, social mobility, prosperity and success. Everything we do is focused on developing and delivering high-quality training, qualifications, assessments and credentials that lead to jobs and meet the changing needs of industry.

We partner with our customers to deliver work-based learning programmes that build competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

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City & Guilds of London Institute
Giltspur House
5–6 Giltspur Street
London
EC1A 9DE

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