



City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) (7255-72)

Version 1.0 (January 2025)

Qualification Handbook

Qualification at a glance

Subject area	Construction
City & Guilds number	7255
Age group approved	16–19, 19+
Entry requirements	N/A
Assessment	Multiple choice online tests Practical assignment
Grading	Pass/Fail
Approvals	Full approval required
Support materials	Sample assessments
Registration and certification	Consult Walled Garden/Online Catalogue for last dates
Occupational Standard(s)	ST0295 Painter and Decorator

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	7255-72	610/4542/1	375	426

Version and date	Change detail	Section
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1 Introduction

What is this qualification about?

Area	Description
Who is the qualification for?	<p>This qualification is for those individuals who wish to carry out a qualification at college with the view to seeking employment within the painting and decorating sector when completed. The qualification is aimed at all age ranges and will be available to full-time and part-time learners.</p> <p>Learners will gain the skills and knowledge that are important when working as a painter and decorator or progressing to further learning and training in this area.</p> <p>This qualification is suitable for those aged 16 yearsold or over.</p>
What does the qualification cover?	<p>This qualification aligns to the knowledge skills and behaviours in the ST0295 Painter and Decorator Occupational Standard.</p> <p>A range of content is mapped to the Knowledge, Skills and Behaviours (KSBs) within the ST0295 Painter and Decorator Occupational Standard and covers health, safety and welfare in the construction environment, the principles of working in construction, the preparation of different surfaces for decoration and the application of coatings and wallcoverings to walls and ceilings.</p>
What opportunities for progression are there?	<p>16– 18-year-old learners will have the opportunity to progress onto the OS T Level or, if they are able to find an employer, the Level 2 Painter and Decorator Occupational Standard ST0295.</p> <p>Adult learners will be able to progress onto the City & Guilds 6572 Level 2 NVQ in Decorative Finishing and Industrial Painting Occupations (Construction) if they are working in industry.</p>

Area	Description
Why choose this qualification?	The City & Guilds Level 2 Extended Technical Occupational Entry into Painting and Decorating (Diploma) 7255-72 is a high-quality qualification that supports entry into an occupation at Level 2 by providing as close to full occupational competence as is possible in a classroom-based setting. The qualification aligns to an employer-led Occupational Standard at Level 2.

2 Content coverage and mapping

Occupational standards

This qualification has been developed to cover as many of the Knowledge, Skills and Behaviours (KSBs) in the relevant Occupational Standard as it may be reasonable to attain by undertaking a course of education or training. Where KSBs in a relevant Occupational Standard cannot be reasonably obtained within a course of education or training in an educational setting, City & Guilds seeks the validation from credible employers to ensure that the qualification is fit for purpose.

The knowledge and skills content within this qualification has been amplified to reflect the KSBs. High level mapping to the KSBs in the Occupational Standard can be found in the Qualification Structure section. Detailed mapping at unit level can be found in Appendix 1 within this qualification handbook.

The table below shows the Occupational Standard the qualification aligns to:

Qualification	Occupational Standard title/Reference
Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	ST0295 Painter and Decorator

3 Employer engagement

City & Guilds would like to take this opportunity to thank all the employers, trade associations, professional bodies, providers, subject matter experts and consultants who have dedicated time to review and validate this qualification. These stakeholders have been used throughout the development and validation of this qualification to ensure the qualification meets the requirements of the Occupational Standard and the needs of the industry. Employer validation recognises the demand or likely demand for learners who have completed the Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma). This collaborative work is to ensure that a learner studying the Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) has the best opportunities available to them as they progress through their career with a solid base as a starting point.

4 Qualification structure

Structure

To achieve the City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma), learners must achieve all units.

City & Guilds unit number	Unit title	GLH
Learners must achieve all seven mandatory units.		
101	Health and safety in a construction environment	21
201	Principles of welfare, health and safety in construction environments	30
202	Principles of working in the construction industry	50
220	Access equipment	31
221	Preparation of surfaces for decoration	70
222	Application of surface coatings	83
223	Application of wallcoverings to walls and ceilings	90

Unit 101 Health and safety in a construction environment is an imported unit that covers the health and safety knowledge that is required to gain a CSCS 'Green Card' for access to construction sites in the UK.

The unit was developed in conjunction with CITB and CSCS UK Ltd and also exists as a standalone, single unit qualification, City & Guilds Level 1 Award in Health and Safety in a Construction Environment (6072-51).

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 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 GLH, 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 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	375	426

5 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

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.

Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessment.

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 their painting and decorating workshop (cubicles or project areas) allowing candidates to practice the requirements of the units and to carry out the practical assessment.

Personal protective equipment (PPE)

Centres must ensure there is sufficient eye, hand and general respiratory PPE, available for all learners.

Hand tools:

filling knife	scraper
putty knife	spatula
paper hanger's brush/sweep	seam roller
paste brush	sponge
range of brushes for water and solvent paints	roller frame
roller sleeves with a range of pile types	roller pole
roller skuttle	paint kettles (plastic and metal)
tape measure	spirit level
laser level	chalk line
pencil	plumb bob
straight edge	shears
knife	palette knife
hammer	shave hook
dust brush	flat brush
skeleton gun	rubbing block
knotting brush	nail punch

buckets
pasting table

strainer

Power tools:

orbital sander
transformer
rotary wire brush
hot-air gun
LPG gun

Access equipment:

stepladders
hop-ups

Materials:

a range of fillers (powder, fine surface, stopper, caulk)
cleaning agents and thinners (white spirit, turpentine)
tack rag
a range of abrasives
sugar soap
a range of protective sheeting (polythene, cotton twill, lightweight plastic)
various width masking tapes
wallcovering adhesive (ready mixed, powder)
a range of wallcoverings with different matches
lining paper

Paints:

a range of vinyl matt emulsion colours
a range of coloured acrylic eggshells
a range of water-based undercoats and glosses
a range of solvent and water-based primers
knotting solution
a range solvent gloss and matching undercoats

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 (EQA). 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 of Recognition. For more information on both CASS and City & 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 the 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 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.

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
- any 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.

Age restrictions

This qualification is approved for learners aged 16 or above.

Access to assessment and special consideration

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:

<http://www.cityandguilds.com/delivering-our-qualifications/centre-development/centre-document-library/policies-and-procedures/access-arrangements-reasonable-adjustments>

6 Delivering the qualification

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)

Sustainability

City & Guilds is committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and to 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)

Support materials

The following resources are available for this qualification:

Description	How to access
Sample assessments	www.cityandguilds.com
Qualification handbook	www.cityandguilds.com

7 Assessment

Summary of Assessment methods

For City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) candidates must successfully complete:

Assessment component	Assessment method	Description and conditions
101	Externally marked MCQ exam	<p>This assessment covers unit 101.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in the unit using one-mark multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details: http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations</p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City & Guilds website. Live assessment will be delivered by the City & Guilds online platform e-volve.</p>
201	Externally marked MCQ exam	<p>This assessment covers unit 201.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in the unit using one-mark multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details: http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations</p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City & Guilds website. Live assessment will be delivered by the City & Guilds online platform e-volve.</p>

202	Externally marked MCQ exam	<p>This assessment covers unit 202.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in the unit using one-mark multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details: http://www.icq.org.uk/exams-office/ice---instructions-for-conducting-examinations</p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City & Guilds website. Live assessment will be delivered by the City & Guilds online platform e-volve.</p>
253	Externally marked MCQ exam	<p>This assessment covers units 220, 221, 222 and 223.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in units 220, 221, 222 and 223 (and should only be attempted following learner completion of these units), using multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details: http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations</p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City & Guilds website. Live assessment will be delivered by the City & Guilds online platform e-volve.</p>

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Practical
assignment

This assessment covers units 220, 221, 222 and 223.

The practical assignment is externally set and internally marked with external verification.

The assignment is designed to assess the candidate's depth and breadth of knowledge, skills and understanding from across content in the qualification, at the end of their period of learning, and will be completed under supervised conditions.

See JCQ requirements for details:

<http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations>

The test specification shows the coverage of the assessment across the qualification content.

Assignment material availability will be communicated through the publication of a key date schedule.

Scheme of assessment overview

For City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) candidates must successfully complete:

Candidates must complete all assessment components					
Assessment component	Method	Duration	Marks	Marking approach	Grading
101	On-demand E-volve online MCQ	1 hour 10 minutes	45	Externally set and externally marked	Pass/Fail
201	On-demand E-volve online MCQ	45 minutes	30	Externally set and externally marked	Pass/Fail
202	On-demand E-volve online MCQ	1 hour	40	Externally set and externally marked	Pass/Fail
253	On-demand E-volve online MCQ	1 hour	40	Externally set and externally marked	Pass/Fail
263	On-demand practical assignment	15 hours	N/A	Externally set, internally marked and externally verified	Pass/Fail

Candidates must pass all assessment components to achieve the qualification.

Assessment specifications

The assessment specifications outlined in the tables below highlight at high level the way that the qualification content will be assessed within the different assessment components.

Test: 101		Duration: 1 hour 10 minutes	
Unit	Outcome	Number of marks	Approx Percentage %
101	LO1: Know the principles of risk assessment for maintaining and improving health and safety at work	11	24
	LO2: Know the importance of safe manual handling in the workplace	8	18
	LO3: Know the importance of working safely at height in the workplace	9	20
	LO4: Know risks to health within a construction environment	12	27
	LO5: Know the importance of working around plant and equipment safely	5	11
Total		45	100%

Permitted materials: None

Graded: Pass/Fail

Pass mark: the pass mark for this examination is set at 80% (36 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

Test: 201		Duration: 45 minutes	
Unit	Outcome	Number of marks	Approx Percentage %
201	LO1: Know health and safety regulations, roles and responsibilities	4	13
	LO2: Understand accident and emergency reporting procedures and documentation	2	7
	LO3: Understand the management of workplace hazards and risks	5	17
	LO4: Know safe storage requirements for materials and equipment	1	3
	LO5: Understand access requirements and equipment when working at height	2	7
	LO6: Understand safety considerations when working with electrical equipment	4	13
	LO7: Know Personal Protective Equipment (PPE) responsibilities	1	3
	LO8: Understand fire emergency procedures	3	10
	LO9: Understand factors that impact on physical and mental welfare maintenance and management	8	27
Total		30	100%

Permitted materials: None

Graded: Pass/Fail

Pass mark: the pass mark for this examination is set at approx. 66% (20 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

Test: 202		Duration: 1 hour	
Unit	Outcome	Number of marks	Approx Percentage %
202	LO1: Understand working practices in the construction industry	15	38
	LO2: Understand construction information	6	15
	LO3: Understand how to set up and secure construction work areas	2	5
	LO4: Know building substructure and superstructure components	8	20
	LO5: Understand personal development and working with others in the construction industry	6	15
	LO6: Know sustainability and emerging technology considerations affecting the construction industry	3	8
	Total	40	100% ¹

Permitted materials: None

Graded: Pass/Fail

Pass mark: the pass mark for this examination is set at approx. 70% (28 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

¹ Percentages in table rounded to whole numbers (presents as 101% in total due to roundings)

Test: 253	Duration: 1 hour		
Unit	Outcome	Number of marks	Approx Percentage %
220	LO1 Understand selection and inspection of access equipment	2	5
	LO2 Use access equipment	1	3
221	LO1 Understand safety in surface preparation	1	3
	LO2 Prepare timber and timber sheet products	2	5
	LO3 Understand metal preparation processes	2	5
	LO4 Prepare plasterboard and trowel finishes	5	12
	LO5 Remove defective coatings and wallcoverings	2	5
	LO6 Prepare previously painted surfaces	1	3
222	LO1 Understand creating colour	1	3
	LO2 Protect work area	3	7
	LO3 Understand coatings and new technologies	2	5
	LO4 Prepare and apply coatings by brush and roller	6	15
223	LO1 Understand paper production for wallcoverings	3	7
	LO2 Understand adhesives for wallcovering application	3	7
	LO3 Apply standard papers to walls and ceilings	6	15
Total		40	100%

Permitted materials: Non-programmable calculator

Graded: Pass/Fail

Pass mark: the pass mark for this examination is set at approx. 60% (24 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

The table below highlights at high level the way that the practical assessment coverage within the **263** assessment.

Unit	Task
220, 221, 222, 223	Planning
221, 222	Preparing samples
220, 221, 223	Preparation of surfaces
220, 222	Application of paint
220, 223	Application of wallcovering

Permitted materials: Permitted materials will be given to candidates by centres.

Graded: Pass/Fail

Candidates must gain a Pass in all tasks within the assignment to achieve a pass overall.

Assessment objectives

The following assessment objectives are used within the **101 assessment**.
The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 101
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	45 marks - 100%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	0 marks - 0%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	0 marks - 0%

The following assessment objectives are used within the **201 assessment**.
The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 201
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	16 marks - 53%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	14 marks - 47%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	0 marks - 0%

The following assessment objectives are used within the **202 assessment**.
The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 202
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	22 marks - 55%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	18 marks - 45%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	0 marks - 0%

The following assessment objectives are used within the **253 assessment**.
The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 253
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	17 marks - 43%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	19 marks - 47%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	4 marks - 10%

Availability of assessments

Assignment material availability will be communicated through the publication of a key date schedule. This schedule will include when assignment materials will be released to centres.

All assessments that are on e-volve are on demand and can be booked by the centre when the candidate is ready to be entered for the assessment.

Retakes/resits

Multiple choice test(s)

Candidates who have failed an online multiple choice test assessment are permitted up to **four** resits of the assessments before re-registration is required.

Assignment(s)

Candidates who have failed one or more tasks in the assignment will be advised to complete a further period of learning before then resitting fully all tasks within a different version of the assessment. Candidates can resit a different version of the assignment up to maximum of **three** times before re-registration is required.

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 can be used to exempt learners from areas of learning previously achieved, but does not exempt them from assessment.

RPL is allowed and is also sector-specific.

8 Units

Structure of the units

All units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- unit aim
- assessment type
- relationship to Occupational Standards including reference.

Unit 101 also has the following:

- learning outcomes, which are comprised of a number of assessment criteria
- evidence requirements.

Units 201, 202, 220, 221, 222 and 223 also each have the following:

- learning outcomes, which are comprised of a number of topics
- content elements
- supporting information.

Unit guidance for delivery

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 knowledge and skills that a candidate should possess.

For Unit 101 each learning outcome has a set of **assessment criteria** (knowledge) that are simple and concise statements that indicate to a learner something specific they will be learning in relation to the learning outcome. It should provide clarity to a learner at a high level on what they should be expecting to learn or be able to do about a specific area of the learning outcome.

For Units 201, 202, 220, 221, 222 and 223 each learning outcome has a set of **topics** (knowledge or skills) that are simple and concise statements that indicate to a learner something specific they will be learning in relation to the learning outcome. It should provide clarity to a learner at a high level on what they should be expecting to learn or be able to do about a specific area of the learning outcome.

For Units 201, 202, 220, 221, 222 and 223 each topic has a **content element** (what needs to be covered). The content sections define the depth and breadth to which the teaching / learning must be delivered.

It is important for all units that these sections define all the essential content that must be covered for learners to achieve the learning outcome. It is the information in this section that learners will be assessed on.

Transferable employability skills

The Institute for Apprenticeships has developed a transferable skills mapping framework which provides elaboration of generic, transferable employability skills that can be applied across all relevant occupational areas. This framework can be found [here](#).

City & Guilds has considered which transferable employability skills within this framework are relevant to this qualification, and then mapped these skills to the relevant practical outcomes within the qualification content. A mapping grid that outlines how the skills are best reflected in the content is found in each relevant practical unit within this qualification.

Unit 101 Health and safety in a construction environment

Unit level:	Level 1
Guided Learning Hours (GLH):	21
Unit aim:	This is a theory only unit. The purpose and aim of this unit is to provide the learner with the skills and knowledge required in health and safety in a construction environment.
Assessment method:	Multiple choice question (MCQ) assessment
Endorsed by:	CITB
Links to Occupational Standards:	ST0095 (Bricklayer), ST0171 (Property Maintenance Operative), ST0295 (Painter and Decorator), ST0096 (Plasterer), ST0264 (Site Carpenter, Architectural Joiner)

Learning outcomes

1. Know the principles of risk assessment for maintaining and improving health and safety at work
2. Know the importance of safe manual handling in the workplace
3. Know the importance of working safely at height in the workplace
4. Know risks to health within a construction environment
5. Know the importance of working around plant and equipment safely

Learning outcome 1

The learner will:

- 1 Know the principles of risk assessment for maintaining and improving health and safety at work

Assessment criteria

The learner can:

- 1.1 State the purpose of risk assessments and method statements
- 1.2 State the legal requirements of risk assessments and method statements
- 1.3 State common causes of work-related:
 - fatalities
 - injuries
- 1.4 State the implications of not preventing accidents and ill health at work
- 1.5 State the meaning of the following in relation to health and safety at work:
 - accident
 - near miss
 - hazard
 - risk
 - competence
- 1.6 List typical hazards and potential risks associated with the following:
 - resources
 - equipment
 - obstructions
 - storage
 - services
 - wastes
 - work activities
- 1.7 State the importance of reporting accidents and near misses
- 1.8 State typical accident reporting procedures
- 1.9 State who is responsible for making accident reports
- 1.10 State the purpose of dynamic risk assessments

Learning outcome 2

The learner will:

- 2 Know the importance of safe manual handling in the workplace

Assessment criteria

The learner can:

- 2.1 State the reasons for ensuring safe manual handling in the workplace

- 2.2 State the potential injuries and ill health that may occur from incorrect manual handling.
- 2.3 State the employee's responsibilities under current legislation and official guidance for:
 - moving and storing materials
 - manual handling
 - mechanical lifting
- 2.4 State the procedures for safe lifting in accordance with official guidance
- 2.5 State the importance of using site safety equipment when handling materials and equipment
- 2.6 List aids available to assist manual handling in the workplace:
 - pallet truck
 - forklift truck
 - lifting sling
 - roust-about
 - wheelbarrow
 - sack barrow
 - kerb/vacuum lifters
- 2.7 State how to apply safe work practices, follow procedures and report problems when carrying out safe manual handling in the workplace

Learning outcome 3

The learner will:

- 3 Know the importance of working safely at height in the workplace

Assessment criteria

The learner can:

- 3.1 Define the term 'working at height'
- 3.2 State the employee's responsibilities under current legislation and official guidance whilst working at height
- 3.3 List hazards and potential risks associated with the following:
 - dropping tools and debris
 - stability of ladders
 - overhead cables
 - fragile roofs
 - scaffolds
 - internal voids
 - equipment
 - the working area
 - other people
- 3.4 State how hazards and potential risks associated with working at height can be controlled

3.5 State the regulation that controls the use of suitable equipment for working at height

Learning outcome 4

The learner will:

4 Know risks to health within a construction environment

Assessment criteria

The learner can:

- 4.1 List the main groups of substances hazardous to health under current regulations
- 4.2 List common risks to health within a construction environment:
 - hand Arm Vibration
 - noise
 - respiratory illness
 - dermatitis
 - musculoskeletal problems
 - falling from height
 - struck by moving plant machinery
- 4.3 State the types of hazards and potential risks that may occur in the workplace linked with the use of drugs and alcohol
- 4.4 State the importance of the correct storage of combustibles and chemicals on site
- 4.5 State the importance of personal hygiene within a construction environment
- 4.6 State the potential risks to the health of workers exposed to asbestos
- 4.7 State the types of asbestos waste
- 4.8 State the types of personal protective equipment (PPE) that may be used when dealing with hazardous materials

Learning outcome 5

The learner will:

5 Know the importance of working around plant and equipment safely

Assessment criteria

The learner can:

- 5.1 List ways in which moving plant, machinery or equipment can cause injuries
- 5.2 State the hazards/risks relating to the use of plant and equipment
 - struck by moving machinery
 - striking cables and buried services
 - trapped by moving machinery
 - damage from flying debris

- electric shocks
 - burns
 - noise
 - tripping
 - injury during use and changing tooling
 - dust
- 5.3 State the importance of safeguards located near where plant, machinery and equipment are being used
- 5.4 State the importance of keeping a safe distance away from plant, machinery or equipment until clear contact is made with the operator
- 5.5 Outline how method statements can assist in ensuring the safety of workers where moving plant, machinery or equipment is in use
- 5.6 State the ways to eliminate or control risks relating to working around plant, machinery or equipment
- 5.7 Identify hazard warning signs and symbols used when operating, working with, around or in close proximity to plant, machinery or equipment.

Unit 101 Health and safety in a construction environment

Supporting information

Evidence requirements

Assessment requirements:

Assessment criteria 1.6:

One hazard and potential risk must be listed for **each** of the following:

- resources
- equipment
- obstructions
- storage
- services
- wastes
- work activities

Assessment criteria 2.6:

Four aids must be listed

Assessment criteria 3.3:

One hazard and potential risk must be listed for **each** of the following:

- dropping tools and debris
- stability of ladders
- the working area
- overhead cables
- fragile roofs
- scaffolds
- internal voids
- equipment
- other people

Assessment criteria 4.1

List **five** substance groups

Assessment criteria 4.2:

Five risks to health must be listed

Assessment criteria 4.7:

Two types of asbestos waste must be stated

Assessment criteria 4.8:

Three types of personal protective equipment (PPE) must be stated

Assessment criteria 5.2:

Five hazards and **five** potential risks must be stated

Unit guidance for delivery

<p>Opportunities for efficiencies in delivery across/between units:</p>	<p>Deliver alongside the level 2 'Health, safety, and welfare in construction environments' as there may be efficiencies.</p> <p>Providers should consider candidate cohort and relevant chosen construction specialism(s) when preparing to deliver to see where contextualisation can be added to enhance relevance.</p> <p>There may be some efficiencies with health and safety practice content before/in line with associated practical activities from the trade specific content areas.</p>
<p>Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:</p>	<p>Short formative assessments at the end of sessions/aligned to outcome.</p> <p>Sample test exam prep session(s) to prepare for assessment.</p>
<p>Opportunities for visits/engagement with local industry and employers:</p>	<p>Site visits linked to specific trade area.</p> <p>Guest lectures/speakers from local employers explaining elements of health and safety and how addressed on site.</p>
<p>Considerations for innovative methods of delivery:</p>	<p>Blended learning approach – online learning opportunities.</p> <p>Learners research and investigation of local/national health and safety incidents that have made recent news, related to their chosen/specific trade area and explore their impacts (eg changes in legislation/practice, implications for employees, fines etc).</p>
<p>Ways of ensuring content is delivered in line with current, up to date industry practice:</p>	<p>Providers should check current legislation/guidance for amendments/changes prior to content delivery.</p> <p>Staff CPD in line with current practice (eg CSCS card).</p>
<p>EDI or accessibility considerations:</p>	<p>Teaching for some specific areas may need adaptation eg PPE considerations based on religious grounds (eg headwear).</p>
<p>Digital initiative considerations:</p>	<p>Online VR tools to explore risks and hazards in workshop.</p>
<p>Sustainability considerations:</p>	<p>Encouraging paperless working practices – printing materials only where necessary.</p>
<p>Books:</p>	<p>HSE pamphlets available from HSE website.</p>

Websites:

<https://www.hse.gov.uk/>

<https://www.nebosh.org.uk/home/>

<https://www.ioshmagazine.com/>

Unit 201 Principles of welfare, health and safety in construction environments

Unit level:	Level 2
Guided Learning Hours (GLH):	30
Unit aim:	<p>This is a theory only unit.</p> <p>The purpose of this unit is to provide learners with the knowledge required to enable them to carry out safe working practices in construction environments, including sourcing relevant safety information and using relevant safety procedures at work.</p> <p>This unit covers core cross-construction sector knowledge including awareness of key health and safety legislation and regulations and through completion of the unit learners will understand the roles and responsibilities of employers and employees in maintaining safe sites.</p> <p>The unit covers processes for hazard identification, risk assessments, accident reporting, emergency response and welfare provision. Learners will gain knowledge on safe working practices relating to working at height, electrical safety, manual handling, PPE and fire prevention.</p> <p>This unit provides foundational health and safety knowledge to operate safely in the sector.</p>
Assessment method:	Multiple choice question (MCQ) assessment
Links to Occupational Standards:	ST0095 (Bricklayer), ST0171 (Property Maintenance Operative), ST0295 (Painter and Decorator), ST0096 (Plasterer), ST0264 (Site Carpenter, Architectural Joiner)

Learning outcomes

1. Know health and safety regulations, roles and responsibilities
2. Understand accident and emergency reporting procedures and documentation
3. Understand the management of workplace hazards and risks
4. Know safe storage requirements for materials and equipment
5. Understand access requirements and equipment when working at height
6. Understand safety considerations when working with electrical equipment
7. Know Personal Protective Equipment (PPE) responsibilities
8. Understand fire emergency procedures

9. Understand factors that impact on physical and mental welfare maintenance and management

Learning outcome 1

Know health and safety regulations, roles and responsibilities

Topics	Content elements
1.1 Legislation and the roles of employers and employees	<p>1.1.1 Where information on health and safety legislation relevant to, and used in, the construction environment can be found and key employee considerations for each legislation</p> <p>a) Legislation:</p> <ol style="list-style-type: none"> i. Health and Safety at Work Act (HASWA) <ul style="list-style-type: none"> • follow workplace procedures and systems • follow slip, trip and fall prevention methods • use equipment and PPE properly • report any issues or risks ii. Reporting Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR) <ul style="list-style-type: none"> • report any work-related incidents • provide details for reporting purposes • comply with reporting procedures iii. Control of Substances Hazardous to Health (COSHH) <ul style="list-style-type: none"> • follow instructions for safe use • use control measures properly • report exposure incidents iv. Construction, Design and Management (CDM) regulations <ul style="list-style-type: none"> • take care of own health and safety • be aware of safety of others who may be affected by own actions • report potential safety issues to the employer v. Provision and Use of Work Equipment Regulations (PUWER) <ul style="list-style-type: none"> • use equipment only if trained • report any faulty equipment • follow safety instructions provided vi. Manual Handling Operations Regulations (MHR) <ul style="list-style-type: none"> • follow safe lifting techniques • use aids where provided • report unsafe loads or practices vii. Personal Protective Equipment (PPE) at Work Regulations <ul style="list-style-type: none"> • use PPE correctly as instructed

Topics

Content elements

- help maintain PPE properly
- report any defects or issues
- viii. Work at Height Regulations (WAHR)
 - use safety equipment provided
 - follow training and procedures
 - do not undertake unsafe practices
- ix. Control of Noise at Work Regulations (CNWR)
 - wear hearing protection when required
 - follow noise control procedures
 - report potential issues or over-exposure
- x. Control of Vibration at Work Regulations (CVWR)
 - take regular rest breaks from use of vibrating tools
 - report potential symptoms of vibration exposure
 - follow control measures implemented
- xi. Electricity at Work Regulations (EAWR)
 - visually check equipment before use
 - report any defects immediately
 - follow safe systems of work
- xii. Lifting Operations and Lifting Equipment Regulations (LOLER)
 - do not use equipment unless trained
 - follow safe lifting practices
 - report any defective equipment
- xiii. Confined Spaces Regulations
 - avoid entry into confined spaces whenever possible
 - if entry is unavoidable, follow a safe system of work
 - put in place adequate emergency arrangements before starting work in confined spaces
- xiv. Building Safety Act
 - comply with building regulations and fire safety orders
 - escalate/report significant fire and structural safety concerns
- xv. The Control of Lead at Work Regulations
 - use appropriate PPE
 - follow safe working practices.
- b) Where information can be found:
 - i. government website – HSE website
 - ii. company handbook/induction materials
 - iii. local authority websites.

1.1.2 Employer and employee responsibilities under the Health and Safety at Work Act (HASWA)

Topics	Content elements
	<p>a) Employer responsibilities:</p> <ol style="list-style-type: none"> i. provision of safe working environment ii. provision of access to adequate staff training <ul style="list-style-type: none"> • CSCS card • induction • toolbox talks iii. provision of health and safety information iv. completion of risk assessments v. supervision vi. provision of PPE for employees vii. reporting of hazards, accidents and near misses viii. CDM regulations, construction phase plans ix. protecting/providing provision for employee welfare x. display of public liability insurance and health and safety law posters/information. <p>b) Employee responsibilities:</p> <ol style="list-style-type: none"> i. exercise a duty of care to themselves and to others ii. work in a safe manner iii. comply with employer instructions iv. work safely with other trades v. report hazards, accidents and near misses vi. follow organisational procedures.
<p>1.2 Organisations involved in health and safety advice and guidance</p>	<p>1.2.1 The key role/purpose of organisations and bodies involved in providing relevant health and safety information and guidance</p> <p>a) Key role/purpose of organisations and bodies:</p> <ol style="list-style-type: none"> i. Health and Safety Executive (HSE) <ul style="list-style-type: none"> • government body responsible for health and safety regulation and enforcement ii. Institute of Occupational Health and Safety <ul style="list-style-type: none"> • professional body for occupational safety and health professionals iii. British Safety Council <ul style="list-style-type: none"> • charity providing health, safety and environmental advice iv. Royal Society for the Prevention of Accidents (RoSPA) <ul style="list-style-type: none"> • charity promoting safety in the workplace and in public spaces v. local authorities <ul style="list-style-type: none"> • enforce regulations locally and provide health and safety services vi. Construction Industry Training Board (CITB)

Topics	Content elements
	<ul style="list-style-type: none"> • training, skills and standards body for the construction industry <p>vii. manufacturers (equipment and materials)</p> <ul style="list-style-type: none"> • provide expert advice on safe use of their specific products. <p>1.2.2 Roles and responsibilities of the Health and Safety Executive (HSE) and their inspectors</p> <p>a) HSE roles and responsibilities:</p> <ol style="list-style-type: none"> i. reduce accidents through education and advice ii. inspection iii. investigation eg site investigations iv. advice and enforcement.
1.3 Communicating health and safety information in construction environments	<p>1.3.1 Reasons for/purpose of holding on-site safety inductions and toolbox talks</p> <p>a) Reasons for/purpose of on-site safety inductions:</p> <ol style="list-style-type: none"> i. ensure employees understand site health and safety requirements in relation to <ul style="list-style-type: none"> • methods of accident reporting • methods of fire reporting • location of assembly points • location of risk assessments • evacuation procedures • first aid procedures ii. identify specific hazards associated with the site iii. ensure employees understand company policies and procedures and their roles in relation to them iv. ensure employees understand site layout v. maintain safe site access. <p>b) Reasons for/purpose of toolbox talks:</p> <ol style="list-style-type: none"> i. update on incidents and accidents ii. update on access routes and site layout iii. update on changes to company policies and procedures iv. update on manufacturers/suppliers' materials and plant movement.

Learning outcome 2

Understand accident and emergency reporting procedures and documentation

Topics	Content elements
2.1 Emergencies and major occurrences	<p>2.1.1 Major occurrences defined as emergencies that may occur in the construction workplaces and potential causes of emergencies that may occur in construction workplaces</p> <p>a) Emergencies:</p> <ol style="list-style-type: none">i. fireii. security incident<ul style="list-style-type: none">• unauthorised persons on site• terrorism• vandalismiii. gas leakiv. explosionv. collapse of scaffoldingvi. collapse of excavationsvii. vehicle strikes (moving plant and machinery)viii. physical injury to personnel. <p>b) Potential causes:</p> <ol style="list-style-type: none">i. fire<ul style="list-style-type: none">• fuel spillage• smoking on site• burning of waste• hot workii. security incident<ul style="list-style-type: none">• inefficient security measures in placeiii. gas leak<ul style="list-style-type: none">• poor storage of gas cylinders• unprofessional practice• unknown services/existing services in placeiv. explosion<ul style="list-style-type: none">• gas leak• fuel spillage• mixing of chemicals• poor storage of hazardous materialsv. collapse of scaffolding<ul style="list-style-type: none">• adverse weather• missing components• unauthorised modifications• overload of weight• insufficient safety checks• poor erection/quality of work

Topics	Content elements
	<ul style="list-style-type: none"> vi. collapse of excavations <ul style="list-style-type: none"> • adverse weather • poor shoring • lack of barriers • plant operation proximity.
<p>2.2 Dealing with accidents and emergencies</p>	<p>2.2.1 Authorised personnel involved in dealing with accident and emergency situations and their duties</p> <ul style="list-style-type: none"> a) Authorised personnel: <ul style="list-style-type: none"> i. fire warden ii. first aider iii. supervisors/managers iv. safety officer v. emergency services vi. Health and Safety Executive (HSE). b) Duties of authorised personnel: <ul style="list-style-type: none"> i. fire warden <ul style="list-style-type: none"> • ensure safe evacuation of personnel • fight fires if safe to do so ii. first aider <ul style="list-style-type: none"> • attend personal injury incidents • treat minor injuries • liaise with emergency service professionals iii. supervisors/managers <ul style="list-style-type: none"> • oversee safety procedures are taking place • complete documentation to comply with legislation iv. safety officer <ul style="list-style-type: none"> • initial responder • point of call/investigation v. emergency services <ul style="list-style-type: none"> • provide professional medical/rescue assistance vi. Health and Safety Executive (HSE) <ul style="list-style-type: none"> • carry out investigations into accident/emergency incidents. <p>2.2.2 Actions that must be taken upon discovery of an accident in a construction workplace environment and their logical sequence</p> <ul style="list-style-type: none"> a) Accident not involving injury to persons: <ul style="list-style-type: none"> i. step 1 – assess seriousness of incident ii. step 2 – ensure the area is made safe iii. step 3 – alert other relevant persons – supervisors, employees

Topics**Content elements**

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- iv. step 4 – assess whether emergency services are required
 - v. step 5 – alert the emergency services in line with workplace protocols.
 - b) Accident involving injury to persons:
 - i. step 1 – call for help/first aider
 - ii. step 2 – ensure the area is made safe
 - iii. step 3 – treat casualty (within limits of training and competency)
 - iv. step 4 – alert the emergency services if required in line with workplace procedures.
 - c) Follow up actions:
 - i. completion of records
 - ii. contact HSE
 - iii. review workplace safety control measures and procedures.
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Learning outcome 3

Understand the management of workplace hazards and risks

Topics	Content elements
3.1 Control measures related to risk assessments	3.1.2 Control measures related to risk assessments and method statements <ul style="list-style-type: none">a) Control measures:<ul style="list-style-type: none">i. good housekeeping in the workplaceii. training of employeesiii. signage and safety procedures.b) Potential outcome of hazards affecting individuals:<ul style="list-style-type: none">i. injuryii. long-term illness/disabilityiii. loss of days worked due to injury/illness/prohibition noticeiv. death.

Topics	Content elements
3.2 Housekeeping in construction environments	<p>3.2.1 Definition of good housekeeping and its importance and purpose in relation to health and safety in construction environments</p> <ol style="list-style-type: none"> a) Definition ‘Good Housekeeping’ – the practice of maintaining a clean, organised and hazard-free work environment. b) Importance and purpose of good housekeeping in relation to health and safety: <ol style="list-style-type: none"> i. maintain safety ii. reduce buildup of waste iii. keep access routes clear iv. safe storage of materials, tools and equipment v. reduce workplace/site congestion vi. enhances good working relationships and reduces stress. <p>3.2.2 Steps that can be taken to maintain good housekeeping in construction environments</p> <ol style="list-style-type: none"> a) Steps/factors that contribute to good housekeeping: <ol style="list-style-type: none"> i. cleanliness of working area ii. tidiness/robust storage systems, designated storage iii. use of skips and chutes iv. segregation of materials v. segregation of stored materials to avoid congestion of work area and access vi. clear access to fire escapes and fire extinguishers vii. waste and debris management viii. storage and maintenance of tools and equipment.
3.3 Signage and notices found in construction environments	<p>3.3.1 Categories of signs and safety notices used in construction workplaces and their key visual characteristics</p> <ol style="list-style-type: none"> a) Categories of signs and safety notices: <ol style="list-style-type: none"> i. prohibition <ul style="list-style-type: none"> • something must not be done ii. mandatory <ul style="list-style-type: none"> • something must be done iii. warning <ul style="list-style-type: none"> • alerting to danger/hazard awareness iv. safe condition <ul style="list-style-type: none"> • indicating equipment is safe to use, or not v. emergency <ul style="list-style-type: none"> • indicating what to do in event of an emergency. b) Shape and colour of categories of safety sign and notice:

Topics	Content elements
	<ul style="list-style-type: none"> i. prohibition <ul style="list-style-type: none"> • circular • red band, white background • imagery of item in black • red diagonal cross ii. mandatory <ul style="list-style-type: none"> • circular • blue and white iii. warning <ul style="list-style-type: none"> • triangle • yellow and black iv. safe condition <ul style="list-style-type: none"> • rectangular • green and white v. emergency <ul style="list-style-type: none"> • rectangular • red and white. <p>3.3.2 Responsibilities of employers and employees relating to signs and safety notices in construction workplaces</p> <ul style="list-style-type: none"> a) Responsibilities of employers: <ul style="list-style-type: none"> i. ensuring signage is present, correct and up to date ii. checking and maintaining signage is visible iii. compliance with legislation and codes of conduct. b) Responsibilities of employees: <ul style="list-style-type: none"> i. read signage ii. adhere to signage iii. escalate issues to a supervisor.

Learning outcome 4

Know safe storage requirements for materials and equipment

Topics	Content elements
4.1 Safe storage of materials and equipment	<p>4.1.1 Considerations for the correct storage of materials and equipment</p> <ul style="list-style-type: none"> a) Safe storage considerations: <ul style="list-style-type: none"> i. stored securely and safely ii. following workplace systems/protocols iii. ease of access and availability iv. kept clean and dry where relevant and possible v. location and designated area of storage.

Topics	Content elements
	b) Importance of safe storage: <ol style="list-style-type: none"> i. prevent damage ii. maintain working order iii. prevent loss/theft iv. restrict/limit access where appropriate.

Learning outcome 5

Understand access requirements and equipment when working at height

Topics	Content elements
5.1 Health and safety consideration when working at height	5.1.1 Responsibilities of employers and employees under current working at height regulations <ol style="list-style-type: none"> a) Responsibilities of employers: <ol style="list-style-type: none"> i. undertake risk assessments ii. employ competent people for working at height iii. provide appropriate equipment iv. ensure sufficient inspection and recording of condition of access equipment as appropriate. b) Responsibilities of employees: <ol style="list-style-type: none"> i. carry out visual inspection before using any ladders scaffolding etc ii. do not alter or remove any parts of scaffold provided iii. use identified access to working height iv. report any safety issues to employer v. use equipment and PPE provided properly. 5.1.2 Types of access equipment used in construction workplace environments and safety considerations for their use <ol style="list-style-type: none"> a) Access equipment: <ol style="list-style-type: none"> i. stepladders ii. ladders (pole, extension) iii. trestles iv. hop-ups v. scaffolding – mobile/static vi. podiums vii. stilts

Topics**Content elements**

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- viii. MEWPs (Mobile Elevating Working Platforms).
 - b) Safety considerations for their use:
 - i. erection by competent persons (where applicable)
 - ii. inspect equipment before use
 - iii. use equipment only if properly trained
 - iv. follow manufacturer's instructions
 - v. maintain three points of contact (where applicable)
 - vi. do not overreach (sideways)
 - vii. check ground condition before setting up – level, firm, stable
 - viii. do not work in adverse weather conditions if unsafe
 - ix. wear appropriate PPE
 - x. use of equipment for intended purpose
 - xi. comply with method statement.
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Learning outcome 6

Understand safety considerations when working with electrical equipment

Topics	Content elements
6.1 Dangers of working with electrical equipment	<p>6.1.1 Potential hazards and risks when using electrical equipment in construction workplace environments</p> <ul style="list-style-type: none">a) Potential hazards:<ul style="list-style-type: none">i. faulty equipmentii. incorrect voltageiii. weather and environmentiv. lack of training/incorrect usev. hidden servicesvi. overheard power linesvii. dust inhalation.b) Potential risks:<ul style="list-style-type: none">i. burnsii. electrocutioniii. deathiv. fire. <p>6.1.2 Precautions that should be taken to avoid risks to self and others when working with electrical equipment and why this is important</p> <ul style="list-style-type: none">a) Precautions:<ul style="list-style-type: none">i. checking tools and equipment before use<ul style="list-style-type: none">• checking leads for signs of wear or damage• checking plugs for labelling and signs of wear or damageii. using cable hangers where possibleiii. ensuring there is a current PAT certificateiv. escalating issues or concerns to a supervisorv. ensuring training has been given before usevi. use of dust suppression measures and use of PPE – electrical safety Respiratory Protective Equipment (RPE)vii. use of safety control equipment and PPE.b) Importance of taking precautions:<ul style="list-style-type: none">i. keep self and other safeii. reduce risk of injury or deathiii. comply with legislation and workplace conduct.

Topics	Content elements
6.2 Power sources and voltages for electrical equipment	<p>6.2.1 Power sources, voltages and voltage colour coding that are used for electrical equipment in construction workplace environments</p> <p>a) Power sources:</p> <ol style="list-style-type: none"> i. battery powered ii. mains powered iii. portable generator iv. renewable energy sources – solar/wind. <p>b) Voltages and associated colours:</p> <ol style="list-style-type: none"> i. no standard colour – 18/24/36 volts <ul style="list-style-type: none"> • battery power for cordless tools ii. yellow – 110/115 volts <ul style="list-style-type: none"> • common workplace voltage for power tools and equipment iii. blue – 230/240 volts <ul style="list-style-type: none"> • standard domestic voltage for power tools and equipment iv. red – 415 volts <ul style="list-style-type: none"> • commercial/industrial machinery.
6.3 Storage of electrical equipment	<p>6.3.1 Methods of safely storing and maintaining electrical equipment and the importance of this</p> <p>a) Methods of safe storage and maintenance:</p> <ol style="list-style-type: none"> i. components present including any safety guards ii. equipment cleaned iii. check for damage regularly/before and after use and report where relevant iv. stored in a clean, dry and secure location v. PAT tested. <p>b) Importance of safe storage/maintenance:</p> <ol style="list-style-type: none"> i. maintain safety of self and others ii. promote efficiency and safe working.

Learning outcome 7

Know Personal Protective Equipment (PPE) responsibilities

Topics	Content elements
7.1 Responsibilities in relation to PPE	<p>7.1.1 Responsibilities of employers and employees relating to PPE under current regulations</p> <ul style="list-style-type: none">a) Responsibilities of employers:<ul style="list-style-type: none">i. ensure suitable PPE is provided free of charge to employees who may be exposed to a risk to their health or safety while at workii. the maintenance, storage and replacement of any PPE they provideiii. provide training and instruction on safe and correct use of PPE for relevant tasks.b) Responsibilities of employees:<ul style="list-style-type: none">i. use PPE correctly following training and instruction from employerii. if PPE is lost or becomes damaged/defective, report to employer and do not useiii. check and ensure PPE to be used is within date before use, and report to employer and do not use where out of date.

Learning outcome 8

Understand fire emergency procedures

Topics	Content elements
8.1 How fires start	<p>8.1.1 How fire is created/caused – Elements essential to the creation of fire and how they interact/depend on each other</p> <ul style="list-style-type: none">a) Elements:<ul style="list-style-type: none">i. oxygenii. fueliii. heat.b) Their inter-dependence/situational requirements:<ul style="list-style-type: none">i. they must all be presentii. they are interdependent – removal of one of the three elements will extinguish the fireiii. may be referred to as the ‘fire triangle’.

Topics	Content elements
8.2 Fire prevention methods	<p>8.2.1 Methods of fire prevention, roles responsible for carrying them out and why this is important</p> <p>a) Methods of prevention:</p> <ol style="list-style-type: none"> i. up-to-date risk assessment ii. keep sources of ignition and flammable substances apart iii. ensure good housekeeping at all times – regular emptying of rubbish bins/skips iv. train workforce on their responsibilities in relation to fire prevention. <p>b) Roles responsible:</p> <ol style="list-style-type: none"> i. all personnel on site/in the workplace ii. appointed fire wardens iii. site manager. <p>c) Importance of fire prevention:</p> <ol style="list-style-type: none"> i. protection of lives/personal safety ii. preservation of property and equipment iii. reduce site downtime, keep job on track iv. compliance with regulation v. avoid legal implications vi. protect reputation/image vii. reduce environmental impacts.
8.3 Extinguishing fires	<p>8.3.1 Actions that must be taken on discovery of a fire and the sequence</p> <p>a) Actions:</p> <ol style="list-style-type: none"> i. step 1 – sound alarm ii. step 2 – assess risk and tackle fire if competent iii. step 3 – evacuate to fire assembly point iv. step 4 – call emergency services. <p>8.3.2 Types of fire extinguisher, their colours and uses</p> <p>a) Types and colours:</p> <ol style="list-style-type: none"> i. water <ul style="list-style-type: none"> • red ii. foam <ul style="list-style-type: none"> • cream/off white iii. CO₂ <ul style="list-style-type: none"> • black iv. dry powder <ul style="list-style-type: none"> • blue. <p>b) Uses:</p> <ol style="list-style-type: none"> i. water

Topics

Content elements

- Class A fires
 - wood
 - paper
 - cloth
 - some plastics
 - never electrical, flammable liquid or gas
- ii. foam
 - Class A and B fires
 - wood
 - paper
 - cloth
 - some plastics
 - flammable liquids
- iii. CO₂
 - Class B and C fires
 - flammable liquids
 - energised electrical equipment
- iv. dry powder
 - Class A, B and C fires
 - applicable for use on all types of fire.

8.3.3 Circumstances under which fire extinguishers can/should be used

- a) Circumstances:
 - i. use in cases where it will aid means of escape/preserve life
 - ii. in other circumstances use only when trained and authorised to do so in case of emergency.

Learning outcome 9

Understand factors that impact on physical and mental welfare maintenance and management

Topics	Content elements
9.1 Considerations in relation to construction workplace welfare	<p>9.1.1 Duty of care considerations in the workplace and why they are important</p> <ol style="list-style-type: none">a) Definition 'Duty of care' – all employers are under a statutory duty to ensure the health, safety and welfare of their staff.b) Duty of care considerations:<ol style="list-style-type: none">i. physical well-beingii. psychological well-being.c) Duty of care importance:<ol style="list-style-type: none">i. safety of employees is maintained<ul style="list-style-type: none">• protection from harm• protection from abuse• protection from injuryii. satisfaction and happiness of employeesiii. legal requirement – statutory requirement in law. <p>9.1.2 Facilities for welfare that must be provided as part of workplace/site set up and their importance</p> <ol style="list-style-type: none">a) Welfare facilities:<ol style="list-style-type: none">i. toiletsii. washing facilities – with hot and cold running wateriii. secure storage for personal itemsiv. canteenv. drinking watervi. drying room.b) Importance/reasons for provision:<ol style="list-style-type: none">i. legal requirementii. employee comfort and duty of careiii. attraction and retention of employeesiv. company reputation. <p>9.1.3 Potential causes and effects of excessive noise and employer/employee responsibilities in relation to minimising the impact</p> <ol style="list-style-type: none">a) Definition 'Excessive noise' – can be gradual from exposure to loud noise over time or that caused by sudden, extreme loud noise.b) Potential causes of excessive noise:<ol style="list-style-type: none">i. machinery and equipment<ul style="list-style-type: none">• excavators

Topics	Content elements
	<ul style="list-style-type: none"> • mixers • cranes ii. power tools <ul style="list-style-type: none"> • drills • saws • grinders iii. demolition activity iv. construction activity v. deliveries and transport of materials with machines vi. communication and radio systems. c) Potential effects of exposure to excessive noise: <ul style="list-style-type: none"> i. deafness/hearing loss ii. tinnitus/ringing in the ears iii. disturbed sleep iv. stress v. communication issues on site/within workplace vi. loss or reduction of working hours. d) Employee precautions: <ul style="list-style-type: none"> i. wearing hearing protection (PPE) – ear defenders ii. adhering to workplace/site rules/training iii. being aware of own safety and that of others on site/in the workplace. e) Employer requirements: <ul style="list-style-type: none"> i. providing PPE and ensuring employees know how/when to use it ii. adherence with legislation iii. regular monitoring of sound levels iv. taking action when excess levels are evident v. ensuring risk assessments are in place and followed.
9.2 Personal physical welfare considerations in construction	<p>9.2.1 Practices and support available to stay physically well and healthy at work</p> <ul style="list-style-type: none"> a) Personal practices that can support staying well/healthy while at work: <ul style="list-style-type: none"> i. taking breaks regularly ii. staying hydrated iii. making smart snack/food choices iv. keeping workplace/station clean v. using good hygiene practices vi. minimising caffeine intake. b) Factors that may support employees to stay well/healthy at work: <ul style="list-style-type: none"> i. a productive working environment eg well lit

Topics	Content elements
	<ul style="list-style-type: none"> ii. provision of an Employee Assistance Programme (EAP) iii. scheduling of regular rest/breaks away from point of work iv. encouragement of positive work/life balance v. frequent recognition of achievement/success vi. provision of social events/interactivity. <p>9.2.2 The importance of maintaining own physical well-being and how to do this in everyday life</p> <ul style="list-style-type: none"> a) Physical well-being importance: <ul style="list-style-type: none"> i. stay healthy/physically well ii. remain fit for task/work and day to day life. b) General physical well-being maintenance: <ul style="list-style-type: none"> i. regular exercise ii. get enough sleep iii. eat healthy regular meals and stay hydrated iv. knowing own physical capabilities and limits to avoid injury. <p>9.2.3 Unacceptable/inappropriate behaviours at work and their likely negative impacts for employees and employers</p> <ul style="list-style-type: none"> a) Unacceptable/inappropriate behaviours at work: <ul style="list-style-type: none"> i. bullying/harassment ii. consumption of alcohol iii. use of illegal drugs iv. not declaring to employer use of prescription medications that can impair judgement v. discrimination of others based on perceived differences vi. initiation ceremonies vii. smoking/vaping outside of designated areas viii. physical or verbal aggression towards others ix. self-harm x. isolation/deliberate exclusion and/or non-cooperation at work xi. coercion, such as pressure to subscribe to a particular political or religious belief xii. circulating or displaying offensive material. b) Potential negative impacts: <ul style="list-style-type: none"> i. for an employee <ul style="list-style-type: none"> • isolation/loneliness • loss of employment • impact on mental health and social relationships • detrimental to personal reputation ii. for an employer

Topics	Content elements
	<ul style="list-style-type: none"> • loss in production • loss of experienced staff • loss of revenue • loss of future orders • creation of negative environment that can impact positive mental health and well-being of employees • legal action/implications • reputational damage. <p>9.2.4 Sources/where to access support in cases of encountering/experiencing negative behavioural issues at work</p> <p>a) Sources of support:</p> <ol style="list-style-type: none"> i. colleagues ii. management iii. human resources iv. trade union representative v. trade organisations vi. police.
9.3 Personal mental welfare considerations in construction	<p>9.3.1 The importance of maintaining own mental well-being and how to do this</p> <p>a) Mental well-being importance:</p> <ol style="list-style-type: none"> i. can perform at optimal level ii. promotes safety – reduces risks and mistakes iii. reduces absence iv. maintain good work and personal relationships <p>b) Mental well-being maintenance:</p> <ol style="list-style-type: none"> i. spending time with others/avoid isolation ii. remote communication with others iii. engaging in open, safe discourse about mental health in the workplace. <p>9.3.2 Ways in which mental ill health can present and where individuals affected directly or indirectly can seek help</p> <p>a) Ways in which mental ill health can present:</p> <ol style="list-style-type: none"> i. stress ii. anxiety iii. depression iv. suicidal feelings/tendencies v. other complex mental health issues vi. absence from work vii. changes in behaviour eg increased aggression viii. self-harm.

Topics	Content elements
	<p>b) Where to seek help:</p> <ul style="list-style-type: none"> i. mental health first aider ii. employer – raise awareness of issues and have the conversation iii. peers and colleagues – raise awareness of issues and have the conversation iv. medical professional/doctor – to get medical support as needed v. specific mental health organisations/charities vi. online support networks. <p>9.3.3 Working methods that can promote good mental health as part of a duty of care and their importance</p> <p>a) Definition ‘Mental health’ – an individual’s emotional, psychological and social well-being.</p> <p>b) Methods that promote good mental health:</p> <ul style="list-style-type: none"> i. ‘buddy’ system – not working alone ii. access to support/information iii. recognising its importance and openly talking about issues iv. robust induction and onboarding processes v. avoiding alcohol and illegal substances vi. taking regular breaks. <p>c) Importance of mental health awareness:</p> <ul style="list-style-type: none"> i. employee well-being and duty of care ii. reduce employee stress and isolation iii. attraction and retention of employees iv. company/industry reputation.

Unit guidance for delivery

<p>Opportunities for efficiencies in delivery across/between units:</p>	<p>Deliver alongside the Level 1 'Health and safety in a construction environment' and Level 2 'Principles of working in the construction industry' unit as there may be efficiencies.</p> <p>Providers should consider candidate cohort and relevant chosen construction specialism(s) when preparing to deliver to see where contextualisation can be added to enhance relevance.</p> <p>There may be some efficiencies with health and safety practice content before/in line with associated practical activities from the trade specific content areas.</p>
<p>Suggestions for formative assessment opportunities:</p>	<p>Short formative assessments at the end of sessions/aligned to outcome.</p> <p>Sample test exam prep session to prepare for assessment.</p>
<p>Opportunities for visits/engagement with local industry and employers:</p>	<p>Employer engagement opportunities for this unit should be incorporated in order to allow the learner to understand application of knowledge learnt in context. This could include site visits linked to specific trade area or having guest lectures/speakers from local employers explaining elements of health and safety and how addressed on site.</p>
<p>Considerations for innovative methods of delivery:</p>	<p>Providers should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions and self-study. A blended learning approach, with online learning opportunities, could be adopted for content delivery.</p> <p>Learners research and investigation of local/national health and safety incidents that have made recent news, related to their chosen/specific trade area and explore their impacts (eg changes in legislation/practice, implications for employees, fines etc).</p>
<p>Ways of ensuring content is delivered in line with current, up-to-date industry practice:</p>	<p>Providers should check current legislation/guidance for amendments/changes prior to content delivery.</p> <p>Staff CPD in line with current practice (eg CSCS card).</p>
<p>EDI or accessibility considerations:</p>	<p>Teaching for some specific areas may need adaptation eg electrical power colour cords, fire extinguisher colours, PPE considerations based on religious grounds (eg headwear).</p>
<p>Digital initiative considerations:</p>	<p>Online VR tools to explore risks and hazards in workshop.</p>
<p>Sustainability considerations:</p>	<p>Encouraging paperless working practices – printing materials only where necessary.</p>
<p>Books:</p>	<p>HSE pamphlets available from HSE website.</p>

Websites:

<https://www.hse.gov.uk/>
<https://www.nebosh.org.uk/home/>
<https://www.ioshmagazine.com/>

Unit 202 Principles of working in the construction industry

Unit level:	Level 2
Guided Learning Hours (GLH):	50
Unit aim:	<p>This is a theory only unit.</p> <p>The purpose of this unit is to introduce learners to the construction industry and to give a wider context to the trade area they are studying, as construction is a vital part of the economy and plays an important role in all our lives. Learners will discover that this sector can be very rewarding and that there are opportunities for career progression. This unit provides learners with an understanding of the principles of construction, building technology and terminology used. This unit also covers various pieces of legislation, including health and safety, planning and building control.</p> <p>This unit covers core cross-construction sector knowledge which will support learners to understand how their future role fits within the context of the construction industry. The unit covers a range of knowledge areas including consideration job roles, related sector areas/industries and how they work together and impact each other, as well as developing learner understanding of key shared concepts such as the importance of sustainability, personal development and equality, diversity and inclusion.</p>
Assessment method:	Multiple choice question (MCQ) assessment
Links to Occupational Standards:	ST0095 (Bricklayer), ST0171 (Property Maintenance Operative), ST0295 (Painter and Decorator), ST0096 (Plasterer), ST0264 (Site Carpenter, Architectural Joiner)

Learning outcomes

1. Understand working practices in the construction industry
2. Understand construction information
3. Understand how to set up and secure construction work areas
4. Know building substructure and superstructure components
5. Understand personal development and working with others in the construction industry
6. Know sustainability and emerging technology considerations affecting the construction industry

Learning outcome 1

Understand working practices in the construction industry

Topics	Content elements
1.1 Areas of work and personnel involved in construction work	<p>1.1.1 Types of building construction work that may be encountered when working in the industry and their key features</p> <ol style="list-style-type: none">a) Types of work:<ol style="list-style-type: none">i. new buildii. renovationiii. maintenanceiv. restoration/retrofitv. domesticvi. commercialvii. industrialviii. demolition.b) Key features of different types of work:<ol style="list-style-type: none">i. relative cost implicationsii. regional variationsiii. relative controls and regulations in placeiv. speculative new build. <p>1.1.2 Organisations and bodies that contribute to, and are involved in the construction process and their main responsibilities</p> <ol style="list-style-type: none">a) Organisations and bodies:<ol style="list-style-type: none">i. building contractorsii. manufacturers/suppliersiii. local authoritiesiv. legislative bodiesv. training organisationsvi. professional bodies.b) Responsibilities of organisations and bodies:<ol style="list-style-type: none">i. building contractors<ul style="list-style-type: none">• plan, manage, monitor and coordinate the entire construction phase conforming to Construction Design Management (CDM)• taking account of the health and safety risks to everyone affected by the work including members of the public in planning and managing the measures needed to control themii. manufacturers/suppliers<ul style="list-style-type: none">• must comply with all relevant requirements under the Construction Products Regulation as retained in UK lawiii. local authorities<ul style="list-style-type: none">• prepare town and city plans and their associated basic development programmes to promote the improvement of various urban facilities, as well as area development and construction issue building consents

Topics	Content elements
	<ul style="list-style-type: none"> • inspect building work for which it has granted a building consent iv. legislative bodies <ul style="list-style-type: none"> • inspect and confirm that all activities and standard of work carried out meet the requirements of all regulatory bodies v. training organisations <ul style="list-style-type: none"> • meet industry requirements for training and development • recommending standards vi. professional bodies <ul style="list-style-type: none"> • Continuing Professional Development (CPD) • provide recommendations for future legislation.
<p>1.2 Roles of construction colleagues, team members and career progression pathways</p>	<p>1.2.1 Professional, craft and operative roles in the building team and their key responsibilities</p> <p>a) Professional role responsibilities:</p> <p>i. architect</p> <ul style="list-style-type: none"> • liaise with client and other relevant parties to design building, and ensure it is completed to standard • the client's representative on site/in the workplace • specify materials used for the project • on smaller projects advising on legal matters, including risks and disputes, monitor sub-contractors and stages of construction <p>ii. quantity surveyor</p> <ul style="list-style-type: none"> • work out quantities and costs of materials, time and labour for tender • negotiate contracts and work schedules • advise on legal matters, including risks and disputes • monitor sub-contractors and stages of construction <p>iii. building surveyor</p> <ul style="list-style-type: none"> • guide construction and development projects • provide professional advice on matters such as the structural integrity of a property or, its value, accessibility specifications and health and safety requirements • advise on energy efficiency and environmental impact of a property <p>iv. structural engineer</p> <ul style="list-style-type: none"> • ensure structures can withstand the stresses and pressures imposed through use and from the environment • calculate stability, strength and rigidity • advise on size scale and suitability of materials used <p>v. mechanical engineer</p> <ul style="list-style-type: none"> • create solutions and solve problems, playing a central role in the design and implementation of moving parts in a range of industries <p>vi. estimator</p>

Topics	Content elements
	<ul style="list-style-type: none"> • calculate how much construction projects will cost, taking into account labour, materials and equipment requirements • negotiate with suppliers and gain quotes from sub-contractors • use this information to compile detailed cost proposals for a client • works closely with the quantity surveyor • usually responsible for completing tenders <p>vii. site manager</p> <ul style="list-style-type: none"> • coordinate the total build of the project from start to finish including organising schedule of work, costings and budgets • plan the work and oversee the buying/hiring of plant and equipment <p>viii. architectural technologist</p> <ul style="list-style-type: none"> • work with architects to develop technical drawings, building models, material specifications • ensure designs meet regulations <p>ix. BIM manager</p> <ul style="list-style-type: none"> • oversee the building information modelling process • manage digital 3d model data, design collaboration and file sharing <p>x. project manager</p> <ul style="list-style-type: none"> • plan and oversee entire project lifecycle • manage budget, schedule, quality, safety, staffing, materials, subcontractors <p>xi. site engineer/planner</p> <ul style="list-style-type: none"> • develops site plans, logistics, access • order materials, plant, equipment • manage/inspect site operations and contractors <p>xii. building services engineer</p> <ul style="list-style-type: none"> • design and oversee installation of systems such as electrical, ventilation, plumbing, heating/cooling • confirm functionality and compliance. <p>b) Craft role responsibilities:</p> <p>i. carpenter/joiner</p> <ul style="list-style-type: none"> • complete all first and second fix operations in buildings including roof trusses, floors, skirtings, doors staircases, partition walls, and door and window furniture <p>ii. bricklayer</p> <ul style="list-style-type: none"> • lay bricks • pre-cut stone and concrete blocks in mortar • construct, extend and repair buildings, and other structures such as foundations, walls, chimneys or decorative masonry features <p>iii. plumber</p> <ul style="list-style-type: none"> • install water, drainage and heating systems • cut, shape and join pipes and fittings

Topics**Content elements**

- find and fix faults
- service plumbing systems
- iv. gas/heating engineer
 - carry out installation, servicing and maintenance of gas appliances and pipework systems
- v. electrician
 - install indoor and outdoor electrical control, wiring, and lighting systems
 - inspect and test electrical systems, including fuses, transformers and circuit breakers
- vi. plasterer/dry liner
 - apply wet finishes to walls and ceilings and external finish to walls
 - create ornamental features like ceiling roses, cornices and architraves
- vii. painter and decorator
 - apply paint, varnish, wallpaper and other finishes and special coatings to the walls, ceilings and other surfaces of buildings and structures
 - protect surfaces from weather damage, erosion mould and rust
 - make surfaces look attractive
- viii. wall and floor tiler
 - cut and place wall and floor tiles
- ix. roofer
 - covers roof with slates, tiles, sheets or cladding
 - apply waterproof membranes to flat roofs
 - fit plastic or lead flashing around chimneys seal roof joints
- x. renewable energy installer
 - install and maintain renewable energy systems like solar panels, heat pumps, wind turbines
 - follow plans to assemble, connect, test systems
- xi. floor layer
 - prepare and lay flooring materials including wood, laminate, vinyl and carpet
 - measure areas, lay underlay and adhesive, cuts materials, fit trims and edges.
- c) Operative role responsibilities:
 - i. general building operative/labourer
 - unload materials
 - prepares site/workplace areas
 - provides craft teams with materials
 - ii. ground worker
 - excavate trenches
 - prepare and lay drainage pipes
 - prepares and lay floors and sub strata for roads
 - iii. highways operative
 - work on roads and highways on paving, repair to surfaces, cleaning and traffic management

Topics

Content elements

- iv. plant operative
 - drive and operate construction plant (including excavators and dumpers)
- v. scaffolder
 - erect and dismantle temporary static metal scaffoldings on structures in construction areas to enable others to work at height and carry out their roles safely
 - may set up a scaffolding inside or outside a building.

1.2.2 Key stages involved in a construction project, their logical sequence, and factors that may impact the sequencing

- a) Key stage and their logical sequence:
 - i. stage 1 – site investigation
 - ii. stage 2 – design and planning
 - iii. stage 3 – setting up site
 - iv. stage 4 – groundwork
 - v. stage 5 – substructure
 - vi. stage 6 – superstructure
 - vii. stage 7 – external works
 - viii. stage 8 – internal services and finishes
 - ix. stage 9 – testing, commissioning and handover.
- b) Factors that impact sequencing:
 - i. planning permission
 - ii. site conditions
 - iii. lack of/shortage of materials and or labour
 - iv. adverse weather
 - v. disputes
 - vi. regulatory changes
 - vii. accidents
 - viii. investigations.

1.2.3 Career opportunities and progression routes that exist in the construction industry and where to get information on them

- a) Career opportunities in hierarchy order:
 - i. craft
 - ii. supervisory
 - iii. managerial
 - iv. professional.
- b) Progression routes in sequence:
 - i. apprenticeship to level 2/3
 - ii. craft level 2/3 progress to supervisor
 - iii. further study to site manager or similar role
 - iv. higher education into a professional role.
- c) Where to access information:
 - i. employer
 - ii. college/university open days – progression within education
 - iii. local company websites
 - iv. trade organisation websites
 - v. CGLI website

Topics	Content elements
	<p>vi. careers advisor.</p> <p>1.2.4 The importance/benefits of maintaining Continuous Professional Development (CPD) and lifelong learning</p> <p>a) Definition 'CPD' – ongoing process of acquiring and enhancing knowledge, skills and competencies throughout own professional career. Involves engaging in activities and learning opportunities that help individuals stay up to date with industry trends, advancements and best practices.</p> <p>b) Benefits of maintaining CPD:</p> <ol style="list-style-type: none"> i. keeping knowledge and skills up to date ii. professional standard of qualifications and registrations are maintained iii. credibility and confidence are built and enhanced iv. employment opportunities increased with possible increased remuneration.
<p>1.3 Communication within construction team and wider (those outside the team)</p>	<p>1.3.1 Key personnel involved in day-to-day communications in construction workplace environments and the chain of reporting</p> <p>a) Definition 'Chain of reporting' – the line of authority and sequence of personnel that information or issues get communicated to within a workplace.</p> <p>b) Personnel and basic chain of reporting:</p> <ol style="list-style-type: none"> i. operatives and craft personnel report to ii. supervisors report to iii. site managers report to iv. project manager reports to v. clients/end user/occupier vi. suppliers – may report to a combination of i – v depending on project. <p>1.3.2 Additional parties' roles involved in wider communication on construction projects and activities</p> <p>a) Additional parties:</p> <ol style="list-style-type: none"> i. architects ii. Quantity Surveyor (QS) iii. safety officer iv. local authority planning v. local residents/neighbours to site/workplace area vi. building inspector (LABC or appointed) vii. environmental bodies viii. conservation officer ix. National House Building Council (NHBC). <p>b) Additional parties' roles in communication:</p> <ol style="list-style-type: none"> i. architects <ul style="list-style-type: none"> • communicates details of type and size of building/s to be completed ii. quantity surveyor

Topics

Content elements

- notifies client when payments are due
- iii. safety officer
 - communicates workplace safety issues to all personnel
- iv. local authorities planning
 - communicates breaches of planning permission to project manager and client
- v. local residents/neighbours to site/workplace area
 - voice and report consensus of opinion of residents over planned development
- vi. building inspector (LABC or appointed)
 - communicates to contractor and reporting to LA or relevant parties
- vii. environmental bodies
 - requests access and communicates findings of investigations and monitoring to planning team
- viii. conservation officer
 - requests access and communicates findings of investigations and monitoring to planning team
- ix. National House Building Council (NHBC)
 - communicates with architect, project manager and Site Manager on day-to-day site/workplace affairs in respect of new builds.

1.3.3 Forms of communication/ways in which communication may be used in construction workplace environments and their suitability related to information type

- a) Communication methods for types of information being communicated:
 - i. written
 - text/wording
 - formal, detailed or complex information
 - should be clear, concise, accurate and well-structured
 - should follow the appropriate tone, style and format for intended audience
 - ii. verbal
 - voice/words
 - ideas, opinions, emotions or instructions in a direct and personal way
 - should be confident, engaging, respectful and persuasive
 - should use appropriate language, tone of voice, consider appropriate use of specialist terminology
 - iii. visual
 - graphical or pictorial information
 - capture attention and enhance understanding
 - should be simple, attractive, relevant and consistent
 - should use appropriate colours, shapes and symbols effectively.

Topics

Content elements

- b) Types of written communications:
 - i. agenda items and minutes of meetings
 - ii. e-mails
 - iii. texts
 - iv. written notices – signs and posters
 - v. variation orders/architect’s instructions
 - vi. orders to suppliers/delivery notes
 - vii. manufacturer’s instructions
 - viii. specifications
 - ix. leaflets.
- c) Types of verbal communications:
 - i. face-to-face
 - ii. radio
 - iii. mobile phone.
- d) Types of visual communications:
 - i. hand signals
 - ii. video calls/online meetings
 - iii. signage and notices
 - iv. drawings/plans.

1.3.4 Considerations for maintaining positive communication with colleagues and other parties when working in construction environments and the importance/benefits of doing so

- a) Positive written communication considerations:
 - i. creates a permanent record of evidence
 - ii. can be used as a legal document
 - iii. can be sent to many people at once/one time
 - iv. suitable for long and distant communication and repetitive standing orders
 - v. information presented as stated fact – no question as to the content/variation of message via delivery.
- b) Positive verbal communication considerations:
 - i. can aid in building rapport and trust
 - ii. establishes empathy with audience/others
 - iii. allows for quick/instant feedback once delivered
 - iv. reduces possible misunderstandings through opportunity for clarification ‘in the moment’.
- c) Importance/benefits of maintaining positive communications:
 - i. ensure everyone is clear on tasks to be performed
 - ii. avoid misunderstanding
 - iii. maintain/promote safety
 - iv. build trust.

1.4 The importance of good customer service

1.4.1 Key elements and considerations that make up good customer service in construction activities:

- a) Key elements of good customer service:
- i. good communication
 - updated on project details
 - timelines
 - costs
 - changes
 - using their preferred communication method
 - listening to and addressing their concerns
 - ii. reliability/honesty
 - completing high quality work
 - working to schedule as promised
 - taking accountability if issues arise
 - iii. responsiveness
 - reaching out to customers promptly
 - having systems to respond to inquiries, requests, complaints quickly
 - iv. expertise
 - having qualified, knowledgeable staff
 - providing solutions tailored to their needs
 - v. courtesy
 - treating customers with respect and professionalism
 - being patient and helpful even when under pressure
 - making them feel valued
 - positive customer reviews and feedback.

1.4.2 Importance of good customer service in construction from the perspective of employees, employers and customers

- a) Employee perspective:
- i. builds trust and rapport with customers
 - ii. creates positive work environment
 - iii. gives sense of pride in own work
 - iv. opportunity to showcase expertise
 - v. gain recognition and rewards.
- b) Employer perspective:
- i. attracts new customers and business – potential expansion and growth
 - ii. improves customer satisfaction and loyalty – and/or provide recommendations to others
 - iii. reduces complaints and improves reputation
 - iv. competitive advantage over other companies
 - v. increased productivity and profitability.
- c) Customer perspective:
- i. creates a positive experience
 - ii. makes them feel valued and respected
 - iii. issues are handled quickly and effectively
 - iv. needs and expectations are met
 - v. time saved through having trusted source of service.

Topics	Content elements
1.5 Quality assurance and quality control of construction work	<p>1.5.1 The purpose of quality assurance activities to construction activities and the impact they aim to have on quality of work, efficiencies of activity</p> <ul style="list-style-type: none"> a) Definition 'Quality Assurance (QA)' – checking work systematically to make sure it meets standards and requirements. b) Definition 'Quality Control (QC)' – the process of checking outcomes from quality assurance are being achieved eg Building Control. c) QC methods used in construction: <ul style="list-style-type: none"> i. inspections by others/supervisors ii. regular testing – including random sampling iii. documented processes/checklists iv. official audits. d) Purpose and impact of QA and QC activities: <ul style="list-style-type: none"> i. meet agreed quality standards of work ii. maintain consistency across activities/instances iii. check and ensure safety of procedures iv. help find problems in early stages before they cause bigger issues v. increase efficiency through monitoring and correcting issues along the way rather than at the end vi. making sure collective end result of job meets external requirements and factors.
1.6 Roles of construction trade/professional bodies and unions	<p>1.6.1 The role and purpose of trade and professional bodies within the construction sector and the services/benefits they can provide</p> <ul style="list-style-type: none"> a) Role of trade and professional bodies: <ul style="list-style-type: none"> i. provide support and help to tradespeople ii. represent and advocate in cases of issue iii. educate and provide training and CPD iv. source of information and guidance v. support networking within/across trade areas vi. act in advisory role to government vii. promote the industry and careers within it. <p>1.6.2 The role of unions within the construction sector and the services/benefits they can provide</p> <ul style="list-style-type: none"> a) Role of unions: <ul style="list-style-type: none"> i. negotiate agreements with employers on pay and conditions ii. discuss major changes to the workplace eg large scale redundancy iii. discuss members' concerns with employers iv. accompany members in disciplinary and grievance meetings v. provide members with legal and financial advice vi. provide training and opportunities for CPD.

Topics	Content elements
1.7 Competent person schemes and their importance	<p>1.7.1 The role and purpose of competent person schemes in place for construction trades</p> <ul style="list-style-type: none"> a) Role of competent person schemes: <ul style="list-style-type: none"> i. provide evidence of training ii. provide evidence of assessment iii. provide evidence of competence/verification of skills iv. provide proof of identity of individual. b) Purpose of competent person schemes: <ul style="list-style-type: none"> i. upholds industry standards and best practice ii. reduces risks to workers and the public iii. provides assurance to clients/employers.
1.8 Requirements for professional registration when working in the construction industry	<p>1.8.1 Potential benefits of registration with relevant professional construction institutions</p> <ul style="list-style-type: none"> a) Potential benefits of registration: <ul style="list-style-type: none"> i. higher earning potential ii. improved career prospects and employability iii. enhanced status leading to higher self-esteem iv. international recognition of competence and commitment v. evidence of expertise vi. greater influence within own organisation and industry vii. continuous professional development (CPD) viii. legal indemnity cover ix. networking opportunities. <p>1.8.2 The role and purpose of professional institutions related to the construction industry</p> <ul style="list-style-type: none"> a) Role and purpose: <ul style="list-style-type: none"> i. work in the public interest and advance the public good in their respective fields ii. uphold standards of competence, conduct and ethics among members iii. award chartered status to qualified professionals who meet their criteria of knowledge and behaviour iv. provide learning programmes, research, resources, services and events for their members and stakeholders.

Learning outcome 2

Understand construction information

Topics	Content elements
2.1 The purpose of controls on the construction process	<p>2.1.1 Controls and regulations that support the construction process, who they impact and where they can be accessed</p> <ol style="list-style-type: none">a) Controls and regulation types:<ol style="list-style-type: none">i. pre-planning permissionii. planning permission/permitted development/national park authorityiii. building regulationsiv. health and safety lawv. quality and standards (British standards)vi. environmental law/regulationsvii. listed buildingsviii. tree preservation ordersix. English heritage.b) Who is impacted by the controls and regulations:<ol style="list-style-type: none">i. client/homeowner/end userii. design team<ul style="list-style-type: none">• architect• surveyoriii. managerial team<ul style="list-style-type: none">• site manager• site supervisoriv. tradespeoplev. manufactures/suppliers of equipment and materialsvi. the general public.c) Where details of the controls can be accessed:<ol style="list-style-type: none">i. onsite/in workplaceii. online eg on government/local authority websitesiii. local librariesiv. in the code of conductv. in induction materialsvi. professional bodiesvii. building material suppliers.
2.2 Types of information and technical drawings used in the construction industry	<p>2.2.1 Construction information used to manage, support and organise projects and roles responsible for their production and use</p> <ol style="list-style-type: none">a) Key construction information used to manage, support and organise:<ol style="list-style-type: none">i. site/workplace rules/code of conductii. bill of quantities<ul style="list-style-type: none">• to control list material quantities and costsiii. construction phase planiv. programme of works/Gantt chartsv. specificationsvi. drawingsvii. schedules

Topics

Content elements

- material/labour
- viii. Building Information Modelling (BIM)
- ix. Risk Assessment and Method Statement (RAMS).

2.2.2 Methods of drawing used for construction plans and blueprints and their advantages and disadvantages

- a) Methods and their advantages/disadvantages:
- i. rough sketch
 - quick
 - cheap
 - low detail
 - ii. hand
 - level of detail may vary
 - time consuming to produce if highly detailed
 - can be more expressive
 - more detailed than a rough sketch
 - iii. line drawing
 - precise
 - accurate
 - easily edited
 - scaled
 - usually more detailed and accurate than a hand drawing
 - iv. Computer Aided Design (CAD)
 - precise
 - adaptable
 - detailed
 - easily sharable electronically
 - may be complex and expensive to produce
 - usually the most detailed and complex form method.

2.2.3 Types and styles of construction drawings

- a) Types of drawing:
- i. location
 - block
 - site
 - layout
 - ii. component detail
 - iii. assembly/detail drawings
 - iv. elevations and plans
 - floorplans
 - reflective plans.
- b) Styles of drawing
- i. orthographic
 - ii. isometric
 - iii. sectional
 - iv. perspective.

Topics

Content elements

2.2.4 Technical information included on construction plans, diagrams

a) Technical information:

- i. scale
- ii. hatchings
- iii. measurements
- iv. dimensions
 - length
 - width
 - height
 - area
- v. symbols
- vi. services
 - water
 - gas
 - electricity
 - drainage
 - internet/phone
- vii. architectural
- viii. version control/date
- ix. orientation.

b) What information on plans is used for:

- i. calculation of materials costs/quantities
- ii. setting out building in correct position
- iii. identifying materials to be used and their location
- iv. positioning and fixing of components
- v. communicating hazards
- vi. indicating specific common locations
- vii. identifying services
- viii. orientation of site when in real world
- ix. communicating common shared set of information across trades/roles
- x. ensuring currency and visibility of alterations/changes
- xi. ownership and version details
- xii. completed vision for project/building.

Topics	Content elements
2.3 Data protection	<p>2.3.1 Importance of data protection legislation and security of information in construction environments and methods workplaces may use to ensure data is kept secure</p> <ul style="list-style-type: none"> a) Legislation: <ul style="list-style-type: none"> i. Data Protection Act ii. General Data Protection Regulation (GDPR). b) Importance: <ul style="list-style-type: none"> i. ensures confidential information kept secure ii. uphold industry regulations iii. secures sensitive documents from theft and misuse <ul style="list-style-type: none"> • staff information • client information iv. prevents data breaches v. allows controlled record access. c) Methods: <ul style="list-style-type: none"> i. user permissions and authentication eg passwords ii. using secure file sharing procedures for transferring documents iii. safe and secure storage of documents iv. regularly backing up data offline v. following company policies.

Learning outcome 3

Understand how to set up and secure construction work areas

Topics	Content elements
3.1 Construction workplace planning requirements	<p>3.1.1 Different areas of construction workplaces that must be included on logistics plans and their importance</p> <p>a) Areas:</p> <ol style="list-style-type: none">i. environmental areas (ponds, plants, trees and wildlife)ii. neighbouring propertiesiii. site/workplace securityiv. service connectionsv. access/egress and parkingvi. site officevii. health, safety and welfareviii. emergency assemblyix. pedestrian routes/accessx. materials – delivery and storage<ul style="list-style-type: none">• dry• open• hazardousxi. waste management/recyclingxii. plantxiii. crane tower location. <p>b) Importance of having the areas marked on plans:</p> <ol style="list-style-type: none">i. for efficient site/workplace movement and access (eg deliveries)ii. to ensure boundary lines are maintained and reduce breachesiii. to maintain and improve safety and securityiv. to clearly inform of location of facilities for allv. to comply with legislation.

Topics	Content elements
3.2 Considerations in relation to construction workplace security	<p>3.2.1 The importance of site/workplace security and the employee/employer responsibilities for ensuring it</p> <p>a) Importance:</p> <ol style="list-style-type: none"> i. to maintain safety ii. to identify and control access iii. to minimise financial loss eg loss/theft of plant, machinery and/or materials iv. to prevent unauthorised entry v. to identify and maintain safe access routes vi. to control access to plant and machinery and controlled substances. <p>b) Responsibilities of employee:</p> <ol style="list-style-type: none"> i. return all materials and equipment after use ii. sign in/out as required iii. report any issues to employer/supervisor iv. follow company guidelines and safety signage. <p>c) Responsibilities of employer:</p> <ol style="list-style-type: none"> i. provide security measures as required eg booking in sign in/out, security fencing, security guards/personnel ii. ensure security reporting procedures and guidance are in place.

Learning outcome 4

Know building substructure and superstructure components

Topics	Content elements
4.1 Types and purposes of substructures	<p>4.1.1 Types of foundations and their descriptions/features</p> <p>a) Types and their descriptions:</p> <ol style="list-style-type: none"> i. pad <ul style="list-style-type: none"> • rectangular or circular pads • usually of concrete • used to support single point loads such as columns ii. pile <ul style="list-style-type: none"> • deep cylindrical foundation • bored below ground • transferring the building load to load bearing ground made up of concrete and steel reinforcement iii. raft <ul style="list-style-type: none"> • reinforced concrete slabs that cover an over site area • often the full footprint of the building iv. strip <ul style="list-style-type: none"> • shallow foundation • used to provide a continuous, level or sometimes stepped strip of support around the perimeter of a building • may also be positioned where there are internal load bearing walls.

Topics	Content elements
	<p>4.1.2 Materials used in substructures</p> <p>a) Materials:</p> <ol style="list-style-type: none"> i. brick ii. block iii. steel iv. concrete v. damp proof course (DPC)/damp proof membrane (DPM) and membranes vi. insulation vii. aggregate.
<p>4.2 Sequence of first and second fix building</p>	<p>4.2.1 First and second building elements and logical sequence considerations relating to their installation</p> <p>a) First fix:</p> <ol style="list-style-type: none"> i. step 1 – external envelope ii. step 2 – roof structure iii. step 3 – roof coverings iv. step 4 – floors v. step 5 – stairs vi. step 6 – partitions vii. step 7 – external door and window frames viii. step 8 – internal door lining ix. step 9 – services x. step 10 – plaster. <p>b) Second fix (order may vary as activities may occur concurrently):</p> <ol style="list-style-type: none"> i. internal doors and door furniture ii. architraves and skirting boards iii. kitchen units iv. electrical fittings v. sanitary ware vi. finishes vii. wall viii. floor ix. landscape.

Topics	Content elements
4.3 Floor types and their associated materials	<p>4.3.1 Types of floors and factors impacting on when they are used</p> <p>a) Types of floors:</p> <p>i. solid</p> <ul style="list-style-type: none"> • concrete • sometimes reinforced and insulated <p>ii. suspended</p> <ul style="list-style-type: none"> • timber • can be concrete beam with block infill. <p>b) Factors impacting floor type:</p> <p>i. loading</p> <ul style="list-style-type: none"> • strength • reinforcement <p>ii. moisture</p> <ul style="list-style-type: none"> • sub floor/ground underneath <p>iii. subsequent finish</p> <ul style="list-style-type: none"> • underfloor heating • liquid floor screed • tiles. <p>4.3.2 Types of materials used for flooring</p> <p>a) Flooring materials:</p> <p>i. block/beam</p> <p>ii. concrete</p> <p>iii. timber</p> <p>iv. steel and concrete deck</p> <p>v. steel reinforcement</p> <p>vi. insulation</p> <p>vii. DPM.</p>

Topics	Content elements
4.4 Wall types and their associated materials	<p>4.4.1 Types of walls and factors impacting on when they are used</p> <p>a) Types of walls:</p> <ol style="list-style-type: none"> i. external <ul style="list-style-type: none"> • cavity • solid • steel frame • curtain • timber frame • concrete frame ii. internal <ul style="list-style-type: none"> • traditional (brick or block) • timber stud • metal stud and metal lining. <p>b) Factors impacting wall type:</p> <ol style="list-style-type: none"> i. loading ii. climate <ul style="list-style-type: none"> • location iii. finish <ul style="list-style-type: none"> • client/architect specification • conservation requirements. <p>4.4.2 Types of materials used for walls</p> <p>a) Wall materials:</p> <ol style="list-style-type: none"> i. brick ii. block iii. render iv. timber v. concrete vi. steel vii. cladding viii. insulation ix. DPC/Structurally Insulated Panels (SIPs) x. ties and clips.

Topics	Content elements
4.5 Roof types and their associated materials	<p>4.5.1 Types of roofs and their common materials and factors affecting their appropriateness/use</p> <p>a) Pitched roof types:</p> <ol style="list-style-type: none"> i. timber <ul style="list-style-type: none"> • traditional hand cut • trussed ii. metal <ul style="list-style-type: none"> • framed • trussed. <p>b) Flat roof types:</p> <ol style="list-style-type: none"> i. timber ii. metal iii. green. <p>c) Roofing materials:</p> <ol style="list-style-type: none"> i. timber ii. lead iii. slate iv. tile <ul style="list-style-type: none"> • concrete • clay • composite v. bitumen felt vi. sheet metal or timber vii. synthetic systems <ul style="list-style-type: none"> • fiberglass • EDPM viii. liquid resin ix. shingle <ul style="list-style-type: none"> • clay • timber • bitumen felt.

Topics	Content elements
4.6 Types of finishes	<p>4.6.1 Types of internal finishes and factors affecting their appropriateness for use</p> <ol style="list-style-type: none"> a) Types of internal finishes: <ol style="list-style-type: none"> i. paint systems ii. paper coverings iii. plaster iv. dry lined with tape and joint system v. tiling vi. cladding <ul style="list-style-type: none"> • timber • plastic • composite. b) Factors affecting use: <ol style="list-style-type: none"> i. base structure ii. customer requirements iii. cost iv. conservation restrictions. <p>4.6.2 Types of external finishes and factors affecting their appropriateness for use</p> <ol style="list-style-type: none"> a) External finishes: <ol style="list-style-type: none"> i. paint systems ii. rendering systems iii. coatings iv. External Wall Insulation (EWI) v. cladding <ul style="list-style-type: none"> • timber • plastic • composite • slate • tile. b) Factors affecting use: <ol style="list-style-type: none"> i. conservation requirements ii. building control iii. customer requirements iv. cost.

Topics	Content elements
4.7 Building services related to construction activities	<p>4.7.1 Types of services that are used to supply buildings, roles responsible for their servicing and maintenance and construction activities that rely on them</p> <p>a) Services:</p> <ol style="list-style-type: none"> i. electricity ii. gas iii. water iv. drainage <ul style="list-style-type: none"> • surface • foul v. communication networks <ul style="list-style-type: none"> • television • internet • phone • 'smart' home services. <p>b) Roles responsible for installation:</p> <ol style="list-style-type: none"> i. electricity <ul style="list-style-type: none"> • electrician and/or national utility company ii. gas <ul style="list-style-type: none"> • gas engineer or plumber if additionally qualified in gas safety national utility company iii. water <ul style="list-style-type: none"> • plumber and/or national utility company (for connection to mains) iv. drainage (surface, foul) <ul style="list-style-type: none"> • local authority • ground worker/plumber v. communication networks <ul style="list-style-type: none"> • internet/telephone engineer.

Topics	Content elements
4.8 Considerations for building materials used in construction activities	<p>4.8.1 Factors affecting materials used in building structure and substructure elements</p> <ul style="list-style-type: none"> a) Elements: <ul style="list-style-type: none"> i. foundations ii. floors iii. walls iv. roofs. b) Factors affecting material use: <ul style="list-style-type: none"> i. availability ii. bearing capacity iii. carbon footprint iv. client expectations/requirements v. conservation requirements (if relevant) vi. cost vii. design requirements viii. ground conditions ix. installation time x. longevity of material/performance over time xi. maintenance requirements xii. physical strength xiii. planning/regulation requirements xiv. purpose xv. sustainability xvi. transport, delivery and position xvii. handling weight.

Learning outcome 5

Understand personal development and working with others in the construction industry

Topics	Content elements
5.1 Equality and protected characteristics	<p>5.1.1 The definition of equality and protected characteristics under current legislation and other potential additional barrier characteristics</p> <ul style="list-style-type: none">a) Definition 'Equality' – a situation in which everyone is equal and has the same rights.b) Protected characteristics:<ul style="list-style-type: none">i. ageii. disabilityiii. gender reassignment/gender identityiv. marriage and civil partnershipv. pregnancy and maternityvi. race (including colour, nationality and ethnic or national origin)vii. religion or beliefviii. sexix. sexual orientation.c) Additional barrier characteristics:<ul style="list-style-type: none">i. employment historyii. educational background/attainmentiii. socio-economic statusiv. criminal recordv. unconscious bias.

Topics	Content elements
5.2 Considerations when valuing diversity and inclusion	<p>5.2.1 The principles of diversity and inclusion in the workplace</p> <ol style="list-style-type: none"> a) Definition 'Diversity' – including or involving people with a range of different characteristics. Having a variety of individuals and points of view represented. b) Definition 'Inclusion' – providing equal access to opportunities and resources for those who might otherwise be excluded. <p>5.2.2 Positive impacts of recognising and valuing diversity and inclusion in the workplace</p> <ol style="list-style-type: none"> a) Positive impacts: <ol style="list-style-type: none"> i. for the individual <ul style="list-style-type: none"> • personal motivation/self-actualisation • feelings of value • well-being • job satisfaction and engagement ii. for team dynamics <ul style="list-style-type: none"> • effective interpersonal communication • positive teamwork • time saving iii. for employers and businesses <ul style="list-style-type: none"> • employee retention • meeting legislation requirements • staff progression • societal reputation • staff recruitment • increased productivity and performance • innovation, creativity and problem solving.

Topics	Content elements
5.3 Regulations, support and guidance relating to equality, diversity and inclusion (EDI)	<p>5.3.1 Current regulations and legislation relating to EDI</p> <ol style="list-style-type: none"> a) Regulations and legislation: <ol style="list-style-type: none"> i. UK Equality Act ii. Human Rights Act. <p>5.3.2 The responsibility for awareness and action in relation to the UK Equality Act</p> <ol style="list-style-type: none"> a) Responsibilities: <ol style="list-style-type: none"> i. for the employee <ul style="list-style-type: none"> • awareness of • adherence to ii. for the employer: <ul style="list-style-type: none"> • awareness of • adherence to • procedures in place to address identified issues • promoting awareness/training employees • point of contact (welfare officer). <p>5.3.3 Sources of other information related to supporting and promoting EDI in the workplace</p> <ol style="list-style-type: none"> a) Sources of information: <ol style="list-style-type: none"> i. company charter/values ii. employee handbook iii. induction materials/programme iv. contractual documents/obligations v. external bodies and legislation vi. displays/signage and posters.
5.4 Characteristics of employment and self-development	<p>5.4.1 Key responsibilities of different employment types</p> <ol style="list-style-type: none"> a) Employment types: <ol style="list-style-type: none"> i. sole trader ii. sub-contractors iii. main developers iv. self-employed b) Responsibilities: <ol style="list-style-type: none"> i. tax ii. administration iii. planning iv. promotion v. insurance/liability vi. remuneration/wages vii. contracts viii. welfare. <p>5.4.2 Skills and characteristics which are beneficial to develop when working in construction roles and why these are important</p> <ol style="list-style-type: none"> a) Skills: <ol style="list-style-type: none"> i. organisational/planning ii. digital literacy iii. communication and collaboration

Topics	Content elements
	<ul style="list-style-type: none"> iv. interpretation of information and directions v. practical trade skills (eg plastering, bricklaying etc). b) Personal traits/characteristics: <ul style="list-style-type: none"> i. responsibility ii. autonomy iii. self-motivation iv. discipline v. resilience. c) Importance: <ul style="list-style-type: none"> i. productivity to meet deadlines/requirements ii. quality of work/finish iii. meeting goals and targets iv. business/career growth and development v. personal mental welfare vi. financial stability. <p>5.4.3 Patterns in employment and the potential impacts of rises and falls in demand</p> <ul style="list-style-type: none"> a) Patterns: <ul style="list-style-type: none"> i. peaks and troughs in construction work ii. recruitment shortfall iii. skills shortage forecasts iv. financial climate v. future trend predictions/forecasts vi. vacancies – use of local labour market intelligence and the opportunities that are available. b) Impacts of fluctuations in demand: <ul style="list-style-type: none"> i. cash flow ii. availability of labour iii. financial incentives and opportunities.

Learning outcome 6

Know sustainability and emerging technology considerations affecting the construction industry

Topics	Content elements
6.1 Sustainability and emerging technologies	<p>6.1.1 Considerations and impacts of sustainability in relation to construction activities</p> <ul style="list-style-type: none">a) Definition 'Sustainability' – constructing with renewable and recyclable resources while minimising waste and energy consumption to protect the natural environment materials.b) Considerations:<ul style="list-style-type: none">i. legislationii. technological advancesiii. education<ul style="list-style-type: none">• eliminate bad practice• encourage reportingiv. sourcing of local materialsv. using energy efficient plant and equipment<ul style="list-style-type: none">• battery powered• solar chargingvi. changes to/or meeting historical practicevii. availability of sustainable materials and equipmentviii. financial cost and available fundingix. waste management practices<ul style="list-style-type: none">• segregation of materials<ul style="list-style-type: none">○ wood○ plastic○ cardboard○ paper○ plasterboard• limit environmental impact• support recyclingx. air flow in building design<ul style="list-style-type: none">• acoustics• airtightness• ventilation.c) Impacts/advantages of sustainability:<ul style="list-style-type: none">i. benefits to the immediate locality<ul style="list-style-type: none">• improved air quality• noise reduction• less wasteii. reduction in carbon footprintiii. a cleaner healthier site/workplaceiv. personal fulfilment ('doing your bit')v. company reputation.d) Potential drawbacks:<ul style="list-style-type: none">i. increased costs

Topics**Content elements**

- ii. reduced/limited availability
 - including ranges/sizes available
- iii. lack of experience/expertise for installation
- iv. potential limitations based on site location/climate
- v. infrastructure for recycling waste
- vi. subject to changing legislation and incentives
- vii. resistance to changing traditional methods.

6.1.2 Emerging and green technologies, resources and materials and activities that may be employed to maintain, increase or enhance the sustainability of building projects and factors that may affect their use

- a) Technologies and resources:
 - i. electric vehicles/machinery
 - ii. solar/photovoltaic panels
 - iii. wind turbines
 - iv. air, water and ground-source heat pumps
 - v. use of drones/Unmanned Aerial Vehicles (UAVs) for area surveying
 - vi. 3D printing technologies
 - vii. Augmented Reality (AR)/Virtual Reality (VR)/simulated training environments
 - viii. Building Information Modelling (BIM).
- b) Materials:
 - i. self-healing concrete
 - ii. insulation types and position
 - iii. liquid floor screeds
 - iv. thin joint systems
 - v. transparent aluminium.
- c) Practices:
 - i. sustainable production – modular/prefab housing
 - ii. recycling/reuse demolition materials for hardcore/architectural salvage
 - iii. carbon neutral building design/'passive' buildings
 - iv. rainwater harvesting and reuse
 - v. installation of EV charging points on site/in buildings
 - vi. installation of green energies as standard
 - vii. replace/reduce/reuse/repurpose/recycle
 - viii. increasing thermal performance of buildings.
- d) Factors affecting use of technologies and practices:
 - i. cost
 - ii. availability
 - iii. site/building location
 - iv. planning and design requirements
 - v. funding availability
 - vi. legislation
 - vii. local authority initiatives/restrictions.

Unit guidance for delivery

Opportunities for efficiencies in delivery across/between units:	<p>Deliver alongside the Level 2 'Principles of welfare, health and safety in construction environments' unit as there may be efficiencies.</p> <p>Providers should consider candidate cohort and relevant chosen construction specialism(s) when preparing to deliver to see where contextualisation can be added to enhance relevance.</p>
Suggestions for formative assessment opportunities:	<p>Short formative assessments at the end of sessions/aligned to outcome.</p> <p>Sample test exam prep session to prepare for assessment.</p>
Opportunities for visits/engagement with local industry and employers:	<p>Employer engagement opportunities for this unit should be incorporated in order to allow the learner to understand application of knowledge learnt in context. This could include site visits linked to specific trade area or having guest lectures/speakers from local employers explaining elements of own role and working environments, career progression etc.</p>
Considerations for innovative methods of delivery:	<p>Providers should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions and self-study. A blended learning approach, with online learning opportunities, could be adopted for content delivery.</p> <p>1.6.1 learners could be encouraged to research a specific trade and professional bodies relevant to their chosen specialism/area of study eg CIBSE, trade organisation umbrella Build UK, FMB (Federation of Master Builders), NFB (National Federation of Builders) etc.</p> <p>1.8.2 learners could be encouraged to research a specific chartered institute relevant to their chosen specialism/area of study eg Chartered Institute of Building (CIOB), Royal Institute of British Architects (RIBA), The Royal Institution of Chartered Surveyors (RICS), Institution of Civil Engineers (ICE), Chartered Institution of Building Services Engineers (CIBSE) etc.</p>
Ways of ensuring content is delivered in line with current, up-to-date industry practice:	<p>Providers should check current legislation/guidance for amendments/changes prior to content delivery.</p> <p>Staff CPD in line with current practice (eg CSCS card).</p>
EDI or accessibility considerations:	None.
Digital initiative considerations:	None.
Sustainability considerations:	Encouraging paperless working practices – printing materials only where necessary.
Books:	N/A

Websites:

- <https://en.unesco.org/sustainabledevelopmentgoals>
UNESCO and Sustainable Development Goals
 - <https://www.paintshow.co.uk/>
National Painting and Decorating Show
-

Unit 220 Access equipment

Unit level:	Level 2
Guided Learning Hours (GLH):	31
Unit aim:	The purpose of this unit is to provide the learner with the skills and knowledge required to select and use the appropriate working at height equipment. Working at height is the biggest cause of severe injury in the construction industry. Working safely with the most appropriate access equipment for the task must be the operative's prime consideration. Understanding and being able to use access equipment safely will provide the decorator with the capability to ensure not only their safety but also the safety of their fellow workers and members of the public.
Assessment method:	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
Links to Occupational Standard:	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

Learning outcomes

- 1 Understand selection and inspection of access equipment
- 2 Use access equipment

Learning outcome 1

Understand selection and inspection of access equipment

Topics	Content elements
1.1 Selection of access equipment	<p>1.1.1 Types of access equipment and factors to consider in selection</p> <p>a) Types:</p> <ol style="list-style-type: none">i. extension laddersii. stepladdersiii. mobile towersiv. trestle platformsv. scaffold staging boardsvi. hop-upsvii. podiumsviii. Mobile Elevated Working Platforms (MEWPs) <p>b) Factors to consider:</p> <ol style="list-style-type: none">i. ground type and conditionsii. height of workiii. type of work – static or mobileiv. duration of workv. weight of materials and operativesvi. number of operativesvii. weather conditionsviii. internal/external locationsix. access and egressx. Work at Height Regulations (WAHR)xi. manufacturer's instructions
1.2 Inspection of access equipment	<p>1.2.1 Reasons for inspecting access equipment, factors to consider and remedial actions</p> <p>a) Reasons:</p> <ol style="list-style-type: none">i. prevention of accidents or incidentsii. identification of faulty equipment:<ul style="list-style-type: none">• damaged components• incomplete assembly• missing components• manufacturing fault <p>b) Factors to consider:</p> <ol style="list-style-type: none">i. inspection time periodsii. impact of adverse weather conditionsiii. inspection log ('scaff' tags) information

Topics	Content elements
	<ul style="list-style-type: none"> iv. accidents or incidents v. misuse or vandalism <p>c) Remedial actions relating to faulty access equipment</p> <ul style="list-style-type: none"> i. removal ii. reporting

Learning outcome 2

Use access equipment

Topics	Content elements
2.1 Factors affecting access equipment usage	<p>2.1.1 Factors to consider when erecting, carrying, moving, using and dismantling access equipment</p> <ul style="list-style-type: none"> a) Factors to consider: <ul style="list-style-type: none"> i. public access ii. health and safety iii. overhead obstacles iv. ground conditions v. manufacturer's instructions vi. minimum number of operatives required vii. regulations: <ul style="list-style-type: none"> • Manual Handling Operations Regulations (MHO) • Personal Protective Equipment (PPE) at Work Regulations • Work at Height Regulations (WAHR) • Health and Safety at Work Act (HASAWA) • Provision and Use of Work Equipment Regulations (PUWER) viii. storage
2.2 Use access equipment	<p>2.2.1 Plan for the use of access equipment</p> <ul style="list-style-type: none"> a) Plan: <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list iv. interpret information from drawings and specifications <p>2.2.2 Select access equipment</p>

Topics**Content elements**

2.2.3 Inspect access equipment

2.2.4 Erect access equipment

2.2.5 Use access equipment following manufacturer's instructions

2.2.6 Carry access equipment

2.2.7 Move access equipment

2.2.8 Dismantle access equipment

- a) Access equipment:
 - i. stepladders
 - ii. hop-ups

Unit guidance for delivery

Opportunities for efficiencies in delivery across/between units:

This unit can be delivered alongside Unit 201 and prior to Units 221–223 as working at height is relevant throughout this qualification.

Naturally occurring training activities involving the use of access equipment will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:

Safety quizzes: Regular safety quizzes can gauge learner understanding of safety considerations and equipment usage. Include multiple-choice, true/false, and short-answer questions to cover a range of topics related to working at height safety.

Scenario-based questions: Present real-life scenarios involving different working at height situations. Ask learners to analyse the scenario, identify potential risks, and suggest appropriate safety measures and actions to take.

Group discussions: Divide the class into small groups and assign each group a specific topic related to working at height safety (eg equipment inspection, ladder safety). Have groups discuss the topic, prepare a short presentation, and share their findings with the class.

Equipment inspection exercises: Provide learners with images of various types of safety equipment used for working at height (eg ladders, scaffolds). Ask them to identify any issues or defects in the equipment based on what they've learned.

Case studies: Provide case studies of real accidents or incidents related to working at height. Ask learners to analyse the causes of the incidents, the potential safety violations, and what could have been done differently to prevent them.

Role-play activities: Assign roles to learners and have them act out different working at height scenarios, emphasising safety. This can help them to understand how effective teamwork contributes to safety.

Peer assessment: This not only reinforces their own understanding but also provides an opportunity for their peers to ask questions and learn from each other.

	Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and considerations for working at height. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.
Opportunities for visits/engagement with local industry and employers:	Visits to suppliers and employers: Arranging visits to outlets and sites where learners can explore the latest range of access equipment is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best equipment for specific projects.
Considerations for innovative methods of delivery:	Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self-study, City & Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.
Ways of ensuring content is delivered in line with current, up to date industry practice:	Using equipment at any height can be hazardous. Safety and the use of PPE must always be emphasised at every opportunity when delivering this unit. Staff delivering this unit must use up-to-date guidance, statistics and information. Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Method statements must be completed prior to any practical activities taking place.
EDI or accessibility considerations:	Tutors need to be proactive in developing practical and theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.

Digital initiative considerations:

Online resources: Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.

Virtual demonstrations: Conduct virtual access equipment demonstrations using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.

Simulation software: Use virtual or augmented reality simulations to create immersive scenarios where learners can practice making safe decisions while working at height. This allows them to experience potential hazards in a controlled environment.

Digital assessments: Implement online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.

Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.

When incorporating digital initiatives, it's essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging unit.

Sustainability considerations:

Industry innovation for example more fibreglass and plastic and lightweight materials in manufacturing. Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to painting and decorating which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of painting and decorating among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.

Books:

Yarde B, Olsen S – The City & Guilds Textbook: Painting and Decorating for Level 1 and Level 2 – (Hodder Education 2020)
ISBN 9781398305779

Websites:

- <https://en.unesco.org/sustainabledevelopmentgoals>
UNESCO and Sustainable Development Goals
- <https://www.paintshow.co.uk/>
National Painting and Decorating Show

Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate (CSW1)	LO2: 2.2
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience (CSW2)	LO2: 2.2
Uses available software appropriately to present written communication, including numerical information (CSW4)	LO2: 2.2
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication (CSW5)	LO2: 2.2
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role (CW1)	LO2: 2.2
Applies sufficient effort to enable them to complete tasks set to the standard required (CW3)	LO2: 2.2
Demonstrates initiative in carrying out own role (CW4)	LO2: 2.2
Problem solving	
Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem (PSW4)	LO2: 2.2
Time management skills	
Plans work: <ul style="list-style-type: none"> • according to priority • taking into account length of time needed to complete tasks • in order to meet deadlines (TMS1) 	LO2: 2.2
Works at an appropriate pace to carry out tasks in accordance with plan (TMS2)	LO2: 2.2

Unit 221 Preparation of surfaces for decoration

Unit level:	Level 2
Guided Learning Hours (GLH):	70
Unit aim:	Good preparation is a key and fundamental part of high-quality painting and decorating. The purpose of this unit is to provide the learner with the skills and knowledge required to identify, prepare and rectify various surfaces and surface finishes.
Assessment method:	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
Links to Occupational Standard:	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

Learning outcomes

- 1 Understand safety in surface preparation
- 2 Prepare timber and timber sheet products
- 3 Understand metal preparation processes
- 4 Prepare plasterboard and trowel finishes
- 5 Remove defective coatings and wallcoverings
- 6 Prepare previously painted surfaces

Learning outcome 1

Understand safety in surface preparation

Topics	Content elements
1.1 Safety considerations in surface preparation	<p>1.1.1 Safety considerations when preparing different surfaces and removing paint, paper and surface debris</p> <ul style="list-style-type: none">a) When preparing different surfaces:<ul style="list-style-type: none">i. manual handlingii. Control of Substances Hazardous to Health (COSHH)iii. Volatile Organic Compound (VOC)iv. slips, trips and fallsv. electrical safety (equipment, hand soaking)vi. working at heightvii. personal protective equipment (PPE) and respiratory protective equipment (RPE)viii. ventilationix. lead paintx. storagexi. waste disposalxii. pressure washing equipment (use of chemicals)b) Surfaces:<ul style="list-style-type: none">i. timber and timber sheetsii. metalsiii. plasterboard and trowel finishes (plaster and render)iv. previously paintedc) When removing paint and paper:<ul style="list-style-type: none">i. manual handlingii. COSHHiii. VOCiv. slips, trips and fallsv. electrical safety (equipment, hand soaking)vi. working at heightvii. PPE and RPEviii. ventilationix. lead paintx. waste disposal<ul style="list-style-type: none">• chemical• hot• bacterial

Learning outcome 2

Prepare timber and timber sheet products

Topics	Content elements
2.1 Types of timber and timber sheets	<p>2.1.1 Common types of timber and timber sheets and their characteristics</p> <ul style="list-style-type: none">a) Timber:<ul style="list-style-type: none">i. softwood (pine, cedar, larch, redwood)ii. hardwoods (oak, mahogany, teak, walnut)b) Timber sheets:<ul style="list-style-type: none">i. Medium Density Fibreboard (MDF)ii. plywoodiii. hardboardiv. blockboardv. Oriented Strand Board (OSB)c) Characteristics:<ul style="list-style-type: none">i. porosityii. durability
2.2 Timber and timber sheet defects and preparation processes	<p>2.2.1 Types of defects affecting timber and timber sheets, their causes and preparation processes for their rectification</p> <ul style="list-style-type: none">a) Types of defects:<ul style="list-style-type: none">i. resin bleedii. end grainiii. cracksiv. moisture contentv. open jointsvi. glue residuevii. protruding nail headsviii. nail holesix. delaminationx. knotsb) Processes:<ul style="list-style-type: none">i. solvent wipingii. dry abradingiii. knottingiv. priming

Topics	Content elements
	<ul style="list-style-type: none"> v. stopping vi. filling
<p>2.3 Tools, equipment and materials used in timber and timber sheet preparation processes</p>	<p>2.3.1 Tools, equipment and materials and their suitability for use in timber and timber sheet preparation processes</p> <ul style="list-style-type: none"> a) Tools and equipment: <ul style="list-style-type: none"> i. filling knife ii. scraper iii. putty knife iv. orbital sander v. belt sander vi. rubbing block vii. transformer viii. power drill ix. dust brush x. skeleton gun xi. knotting brush xii. nail punch xiii. hammer xiv. filling tray xv. palette knife xvi. paint kettles (plastic or metal) xvii. roller frame xviii. roller pole xix. roller skuttle xx. roller sleeves xxi. paint brushes b) Materials: <ul style="list-style-type: none"> i. knotting solution ii. tack rag iii. abrasive papers <ul style="list-style-type: none"> • types (silicon, carbide, aluminium oxide) • grades iv. cloths v. caulk vi. powder filler vii. decontaminants viii. primers: <ul style="list-style-type: none"> • solvent-based • white and pink wood primers • universal wood or metal • shellac knotting

Topics	Content elements
	<ul style="list-style-type: none"> • aluminium wood • water-based <p>For preparation processes see 2.2.1</p>
2.4 Prepare timber and timber sheet products	<p>2.4.1 Plan for the preparation of timber and timber sheet products</p> <p>a) Plan:</p> <ol style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list iv. interpret information from safety data sheets, drawings and specifications <p>2.4.2 Check timber and timber sheets for defects</p> <p>2.4.3 Select and use tools, equipment and materials</p> <p>2.4.4 Select and use appropriate PPE and RPE</p> <p>2.4.5 Use materials to protect work and surrounding areas</p> <p>4) Materials:</p> <ol style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill • lightweight plastic ii. various width masking tapes <p>2.4.6 Apply preparation processes</p> <p>2.4.7 Apply primers (solvent-based, white and pink wood primers, universal wood, shellac knotting, aluminium wood, water-based)</p> <p>2.4.8 Minimise and dispose of waste</p> <p>2.4.9 Clean and store tools and equipment</p> <p>2.4.10 Maintain a safe and clean working environment</p> <p>2.4.11 Review work and check for defects</p> <p>For tools and equipment in 2.4.3 and 2.4.9:</p> <ol style="list-style-type: none"> i. filling knife

Topics	Content elements
	<ul style="list-style-type: none"> ii. scraper iii. putty knife iv. orbital sander v. rubbing block vi. transformer vii. belt sander viii. dust brush ix. skeleton gun x. knotting brush xi. nail punch xii. hammer xiii. filling tray xiv. palette knife xv. paint kettles (plastic or metal) xvi. roller frame xvii. roller pole xviii. roller skuttle xix. roller sleeves xx. paint brushes <p>For materials in 2.4.3 see 2.3.1 b)</p>

Learning outcome 3

Understand metal preparation processes

Topics	Content elements
3.1 Types of metals and metal corrosion	<p>3.1.1 Types of ferrous and non-ferrous metals</p> <ul style="list-style-type: none"> a) Ferrous (metals that corrode or rust): <ul style="list-style-type: none"> i. iron ii. steel iii. cast iron iv. wrought iron b) Non-ferrous (metals that do not corrode or rust): <ul style="list-style-type: none"> i. copper ii. brass iii. aluminium iv. lead v. zinc vi. galvanised steel

Topics	Content elements
	<p>3.1.2 Types of corrosion that can affect ferrous metals and their causes</p> <ul style="list-style-type: none"> a) Types of corrosion: <ul style="list-style-type: none"> i. pitting ii. oxidation iii. millscale b) Causes: <ul style="list-style-type: none"> i. oxygen ii. hydrogen iii. moisture iv. atmospheric pollution
<p>3.2 Metal preparation processes</p>	<p>3.2.1 Metal preparation processes and their purpose</p> <ul style="list-style-type: none"> a) Processes: <ul style="list-style-type: none"> i. descaling ii. degreasing (solvent washing) iii. pressure washing <p>3.2.2 Tools, equipment and materials and their suitability for use in metal preparation processes:</p> <ul style="list-style-type: none"> a) Tools and equipment: <ul style="list-style-type: none"> i. orbital sander ii. transformer iii. pressure washer iv. belt sander v. rotary disc vi. rotary brush vii. needle descaling gun viii. scrapers ix. wire brush x. rubbing block xi. phosphorous bronze brush xii. palette knife xiii. paint kettles (plastic or metal) xiv. roller frame xv. roller pole xvi. roller skuttle xvii. roller sleeves xviii. paint brushes b) Materials:

Topics	Content elements
	<ul style="list-style-type: none"> i. steel wool ii. emery paper iii. aluminium oxide iv. degreasing agents (white spirit, turpentine) v. rust removers
3.3 Metal preparation primers	<p>3.3.1 Types of primers, application methods and their suitability for use on ferrous and non-ferrous metals:</p> <ul style="list-style-type: none"> a) Primers: <ul style="list-style-type: none"> i. mordant solutions ii. zinc phosphate iii. single and two-pack primer iv. etch primers v. water-based primer vi. universal primer b) Application methods: <ul style="list-style-type: none"> i. brush ii. roller iii. spray c) Suitability for use: <ul style="list-style-type: none"> i. adhesion ii. protection iii. surface finish

Learning outcome 4

Prepare plasterboard and trowel finishes

Topics	Content elements
4.1 Surfaces for plasterboard and trowel finishes	<p>4.1.1 Types of surfaces, their physical and chemical properties and suitable types of primers and sealers</p> <ul style="list-style-type: none"> a) Types: <ul style="list-style-type: none"> i. gypsum plaster ii. cement render iii. plasterboard (square and feather edged) iv. blockwork

Topics	Content elements
	<ul style="list-style-type: none"> v. brickwork b) Physical properties: <ul style="list-style-type: none"> i. tactility ii. porosity iii. capillarity iv. adhesion v. density c) Chemical properties: <ul style="list-style-type: none"> i. alkalinity ii. acidity iii. inertness iv. soluble v. salt content vi. water content d) Primers and sealers: <ul style="list-style-type: none"> i. mist coat of emulsion ii. PVA iii. alkaline resistant primer iv. stabilising solution
<p>4.2 Types of plasterboard and trowel finishes defects and preparation processes</p>	<p>4.2.1 Types of plasterboard and trowel finishes defects and preparation processes for their rectification</p> <ul style="list-style-type: none"> a) Trowel finishes (plaster and render) b) Defects: <ul style="list-style-type: none"> i. cracks ii. dry out iii. shrinkage cracks iv. nail heads v. open joints vi. defective pointing vii. efflorescence viii. saponification ix. moss and lichen x. moulds and fungi xi. contamination xii. friable c) Preparation processes: <ul style="list-style-type: none"> i. wetting in

Topics	Content elements
	<ul style="list-style-type: none"> ii. raking out iii. making good iv. abrading v. scraping vi. caulking and taping vii. proud filling viii. flush filling ix. priming
<p>4.3 Tools, equipment and materials used in plasterboard and trowel finishes preparation processes</p>	<p>4.3.1 Tools, equipment and materials and their suitability for use in plasterboard and trowel finishes preparation processes</p> <ul style="list-style-type: none"> a) Tools and equipment: <ul style="list-style-type: none"> i. filling knife ii. scraper iii. dust brush iv. skeleton gun v. nail punch vi. hammer vii. filling tray viii. paint brush ix. palette knife x. paint kettles (plastic or metal) xi. roller frame xii. roller pole xiii. roller skuttle xiv. roller sleeves b) Materials: <ul style="list-style-type: none"> i. plaster-based fillers ii. cement-based fillers iii. joint fillers iv. joint tapes v. reinforced corner tapes vi. abrasives vii. sizes viii. fungicidal washes ix. stainblock x. primers and sealers: <ul style="list-style-type: none"> • mist coat of emulsion • PVA • alkaline resistant primer • stabilising solution

Topics	Content elements
	<ul style="list-style-type: none"> c) Trowel finishes (plaster and render) d) Use in plasterboard and trowel finishes preparation processes: <ul style="list-style-type: none"> i. wetting in ii. raking out iii. making good iv. abrading v. scraping vi. caulking and taping vii. proud filling viii. flush filling ix. priming
<p>4.4 Prepare plasterboard and trowel finishes</p>	<p>4.4.1 Plan for the preparation of plasterboard and trowel finishes</p> <ul style="list-style-type: none"> a) Plan: <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list iv. interpret information from safety data sheets, drawings and specifications b) Trowel finishes (plaster and render) <p>4.4.2 Check plasterboard and trowel finishes for defects</p> <p>4.4.3 Select and use tools, equipment and materials</p> <p>4.4.4 Select and use appropriate PPE and RPE</p> <p>4.4.5 Use materials to protect work and surrounding areas</p> <ul style="list-style-type: none"> a) Materials: <ul style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill • lightweight plastic ii. various width masking tapes <p>4.4.6 Apply preparation processes</p> <p>4.4.7 Apply water-based primer</p> <p>4.4.8 Minimise and dispose of waste</p>

Topics	Content elements
	<p>4.4.9 Clean and store tools and equipment</p> <p>4.4.10 Maintain a safe and clean working environment</p> <p>4.4.11 Review work and check for defects</p> <p>For tools, equipment and materials see 4.3.1</p>

Learning outcome 5

Remove defective coatings and wallcoverings

Topics	Content elements
5.1 Removal processes for defective coatings	<p>5.1.1 Defects and their causes in coatings and processes of paint removal</p> <p>a) Defects:</p> <ol style="list-style-type: none"> i. blistering ii. cracking or crazing iii. flaking iv. excessive film thickness v. runs and sags vi. peeling <p>b) Causes:</p> <ol style="list-style-type: none"> i. applying coatings over damp surfaces ii. resin bleed iii. undercoat not fully cured iv. incorrect temperature v. incorrect preparation method vi. excessive application <p>c) Processes:</p> <ol style="list-style-type: none"> i. liquid paint removing ii. electric hot air iii. liquid petroleum gas (LPG) burning off iv. infrared
5.2 Removal processes for wallcoverings	<p>5.2.1 Defects in wallcoverings and processes of wallcovering removal</p> <p>a) Defects:</p> <ol style="list-style-type: none"> i. poor adhesion ii. mould

Topics	Content elements
	<ul style="list-style-type: none"> iii. redecoration b) Processes: <ul style="list-style-type: none"> i. hand soaking ii. steam stripping iii. dry stripping of peelable papers
5.3 Tools, equipment and materials used in stripping surfaces	<p>5.3.1 Tools, equipment and materials and their suitability for use in stripping surfaces</p> <ul style="list-style-type: none"> a) Tools and equipment: <ul style="list-style-type: none"> i. shave hook ii. scraper iii. dust brush iv. flat brush v. steam stripper vi. sponge vii. bucket viii. spiked roller ix. transformer x. electric hot-air gun xi. LPG gun xii. infrared stripper b) Materials: <ul style="list-style-type: none"> i. liquid paint remover ii. sugar soap iii. wallcovering stripping solution c) Use in stripping surfaces: <ul style="list-style-type: none"> i. heat removal of coatings ii. solvent stripping iii. wallcovering removal
5.4 Remove defective paint coatings	<p>5.4.1 Plan for the removal of defective paint coatings</p> <ul style="list-style-type: none"> a) Plan: <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list iv. interpret information from safety data sheets, drawings and specifications <p>5.4.2 Select and use tools, equipment and materials</p>

Topics	Content elements
	<p>5.4.3 Select and use appropriate PPE and RPE</p> <p>5.4.4 Use materials to protect work and surrounding areas</p> <p>a) Materials:</p> <ol style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill • lightweight plastic ii. various width masking tapes <p>5.4.5 Carry out paint coating removal processes (liquid paint removing and electric hot air)</p> <p>5.4.6 Minimise and dispose of waste</p> <p>5.4.7 Clean and store tools and equipment</p> <p>5.4.8 Maintain a safe and clean working environment</p> <p>5.4.9 Review work and check for defects</p> <p>For tools and equipment in 5.4.2:</p> <ol style="list-style-type: none"> i. shave hook ii. scraper iii. dust brush iv. sponge v. bucket vi. transformer vii. electric hot-air gun viii. liquid paint remover ix. sugar soap x. paint brush xi. metal paint kettle xii. palette knife <p>For materials in 5.4.2:</p> <ol style="list-style-type: none"> i. liquid paint remover ii. sugar soap

Learning outcome 6

Prepare previously painted surfaces

Topics	Content elements
6.1 Processes, tools, equipment and materials for preparation of previously painted surfaces	<p data-bbox="558 280 1474 347">6.1.1 Processes for preparation of previously painted surfaces and their purpose</p> <p data-bbox="558 392 1474 1299"> a) Processes: <ol style="list-style-type: none"> <li data-bbox="654 436 1474 470">i. spot prime <li data-bbox="654 481 1474 593">ii. wet and dry abrading <ul style="list-style-type: none"> <li data-bbox="702 515 1474 548">• mechanical <li data-bbox="702 560 1474 593">• hand <li data-bbox="654 604 1474 638">iii. scraping <li data-bbox="654 649 1474 683">iv. raking out <li data-bbox="654 694 1474 728">v. undercutting <li data-bbox="654 739 1474 772">vi. wetting in <li data-bbox="654 784 1474 817">vii. back filling <li data-bbox="654 828 1474 862">viii. proud filling <li data-bbox="654 873 1474 907">ix. flush filling <li data-bbox="654 918 1474 952">x. dusting off <li data-bbox="654 963 1474 996">xi. washing down <li data-bbox="654 1008 1474 1041">xii. degreasing <li data-bbox="654 1052 1474 1086">xiii. solvent wiping <li data-bbox="654 1097 1474 1131">xiv. pressure washing </p> <p data-bbox="558 1142 1474 1299"> b) Purpose: <ol style="list-style-type: none"> <li data-bbox="654 1142 1474 1176">i. cleaning – to remove contaminants <li data-bbox="654 1187 1474 1220">ii. abrasion – to form a key <li data-bbox="654 1232 1474 1265">iii. filling – to seal gaps, cracks and holes <li data-bbox="654 1276 1474 1299">iv. priming – to even out surface porosity </p> <p data-bbox="558 1332 1474 1400">6.1.2 Tools, equipment and materials and their suitability for use in the preparation of previously painted surfaces</p> <p data-bbox="558 1444 1474 1982"> a) Tools and equipment: <ol style="list-style-type: none"> <li data-bbox="654 1489 1474 1523">i. shave hook <li data-bbox="654 1534 1474 1568">ii. scraper <li data-bbox="654 1579 1474 1612">iii. dust brush <li data-bbox="654 1624 1474 1657">iv. flat brush <li data-bbox="654 1668 1474 1702">v. sponge <li data-bbox="654 1713 1474 1747">vi. bucket <li data-bbox="654 1758 1474 1792">vii. transformer <li data-bbox="654 1803 1474 1836">viii. pressure washer <li data-bbox="654 1848 1474 1881">ix. electric hot-air gun <li data-bbox="654 1892 1474 1926">x. LPG gun <li data-bbox="654 1937 1474 1971">xi. infrared stripper <li data-bbox="654 1982 1474 2016">xii. paint brush <li data-bbox="654 2027 1474 2060">xiii. paint kettle (plastic or metal) </p>

Topics	Content elements
	<ul style="list-style-type: none"> xiv. roller frame xv. roller pole xvi. roller skuttle xvii. roller sleeves xviii. palette knife xix. rubbing block <p>b) Materials:</p> <ul style="list-style-type: none"> i. liquid paint remover ii. sugar soap iii. abrasives: <ul style="list-style-type: none"> • silicon carbide • aluminium oxide • wire wool iv. stoppers: <ul style="list-style-type: none"> • plastic woods • coloured stoppers v. fillers: <ul style="list-style-type: none"> • caulk • powdered (interior, exterior) • ready-mixed • fine surface • two-pack • sand and cement • finishing plaster
6.2 Prepare previously painted surfaces	<p>6.2.1 Plan for the preparation of previously painted surfaces</p> <p>a) Plan:</p> <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list iv. interpret information from safety data sheets, drawings and specifications <p>6.2.2 Select and use tools, equipment and materials</p> <p>6.2.3 Select and use appropriate PPE and RPE</p> <p>6.2.4 Use materials to protect work and surrounding areas</p> <p>a) Materials:</p> <ul style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill

Topics

Content elements

- lightweight plastic
- ii. various width masking tapes

6.2.5 Apply preparation processes to plasterboard, plaster, render, timber

6.2.6 Use stoppers and fillers

6.2.7 Minimise and dispose of waste

6.2.8 Clean and store tools and equipment

6.2.9 Maintain a safe and clean working environment

6.2.10 Review work and check for defects

For tools and equipment in 6.2.2 and 6.2.8:

- i. shave hook
- ii. scraper
- iii. dust brush
- iv. flat brush
- v. sponge
- vi. bucket
- vii. transformer
- viii. electric hot-air gun
- ix. LPG gun
- x. paint brush
- xi. paint kettle (plastic or metal)
- xii. roller frame
- xiii. roller pole
- xiv. roller skuttle
- xv. roller sleeves
- xvi. palette knife
- xvii. rubbing block

For materials in 6.2.2 and 6.2.8 see 6.1.2

Unit guidance for delivery

Opportunities for efficiencies in delivery across/between units:

Naturally occurring training activities used to carry out the preparation of surfaces will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Tutors need to be aware of prior learning that has taken place and use this information to structure individualised learning where appropriate.

Understanding learners' prior learning allows tutors to tailor their teaching methods and materials to meet individual needs and build on learners' existing skills.

Tutors can streamline the learning process, avoiding repetition and focusing on areas where learners need the most improvement. This optimises the use of time and resources, making the learning experience more efficient and rewarding.

Real-life scenarios allow learners to practise in practical settings, building their confidence and competence in real-world situations.

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Scenario-based questions: Present real-life scenarios involving different processes required for different surfaces. Ask learners to analyse the scenario, identify potential risks and suggest appropriate safety measures and best practices for preparing surfaces.

Group discussions: Divide the class into small groups and assign each group a specific topic related to preparation processes. Have groups discuss the topic, prepare a short presentation and share their findings with the class.

	<p>Peer assessment: This not only reinforces learners' own understanding but also provides an opportunity for their peers to ask questions and learn from each other.</p> <p>Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and best practices for preparing surfaces. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.</p>
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<p>Ways of ensuring content is delivered in</p>	<p>Learners must comply with applicable Building Regulations and choose materials that reduce waste.</p>

<p>line with current, up to date industry practice:</p>	<p>The removal of paint and paper can be hazardous if safety is not observed throughout. As well as working at height, there are a range of hazardous tools and materials used in this unit.</p> <p>Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Method statements must be completed prior to any practical activities taking place. Adequate ventilation and the use of hand protection are paramount.</p>
<p>EDI or accessibility considerations:</p>	<p>Tutors need to be proactive in developing practical, theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.</p>
<p>Digital initiative considerations:</p>	<p>Online resources: Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.</p> <p>Virtual demonstrations: Conduct virtual demonstrations of preparation processes using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.</p> <p>Simulation software: Utilise painting and decorating simulation software that allows learners to practise virtually in a risk-free environment. This provides an opportunity to refine their skills before working with actual materials.</p> <p>Digital assessments: Implement formative online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.</p> <p>Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.</p> <p>Augmented Reality (AR): Explore the use of AR technology to overlay digital information on real-world preparation scenarios. AR can provide step-by-step guidance and assist learners in understanding complex concepts.</p> <p>Social media integration: Use social media platforms to share updates, industry news and success stories related to painting and</p>

	<p>decorating. This creates a dynamic learning environment and keeps learners connected to current trends.</p> <p>When incorporating digital initiatives, it is essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging preparation of surfaces unit.</p>
<p>Sustainability considerations:</p>	<p>Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to painting and decorating which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of painting and decorating among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.</p>
<p>Books:</p>	<p>Yarde B, Olsen S – The City & Guilds Textbook: Painting and Decorating for Level 1 and Level 2 – (Hodder Education 2020) ISBN 9781398305779</p>
<p>Websites:</p>	<ul style="list-style-type: none"> • https://en.unesco.org/sustainabledevelopmentgoals UNESCO and Sustainable Development Goals • https://www.paintshow.co.uk/ National Painting and Decorating Show

Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate (CSW1)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience (CSW2)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Uses available software appropriately to present written communication, including numerical information (CSW4)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication (CSW5)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role (CW1)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Applies sufficient effort to enable them to complete tasks set to the standard required (CW3)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Demonstrates initiative in carrying out own role (CW4)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Problem solving	
Gathers appropriate information or advice from different sources to help solve a specific work-related problem (PSW1)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Assesses a range of potential solutions, applying appropriate problem-solving strategies (PSW2)	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2

Selects a specific solution, justifying why this one is the most likely to prove effective **(PSW3)** LO2: 2.4
LO4: 4.4
LO5: 5.4
LO6: 6.2

Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem **(PSW4)** LO2: 2.4
LO4: 4.4
LO5: 5.4
LO6: 6.2

Self-evaluation

Identifies strengths and areas for development in an objective and positive way **(SEW3)** LO2: 2.4
LO4: 4.4
LO5: 5.4
LO6: 6.2

Uses a self-evaluation tool/checklist appropriately and records reflections/progress **(SEW4)** LO2: 2.4
LO4: 4.4
LO5: 5.4
LO6: 6.2

Time management skills

Plans work:
• according to priority LO2: 2.4
• taking into account length of time needed to complete tasks LO4: 4.4
• in order to meet deadlines **(TMS1)** LO5: 5.4
LO6: 6.2

Works at an appropriate pace to carry out tasks in accordance with plan **(TMS2)** LO2: 2.4
LO4: 4.4
LO5: 5.4
LO6: 6.2

Adjusts approach in response to any change of circumstance (eg one task over running), as appropriate, to ensure remaining time is spent effectively **(TMS3)** LO2: 2.4
LO4: 4.4
LO5: 5.4
LO6: 6.2

Unit 222 Application of surface coatings

Unit level:	2
Guided Learning Hours (GLH):	83
Unit aim:	The purpose of this unit is for learners to understand colour systems, surface coatings, their application and suitability for a surface. Knowing how to create a pleasing and acceptable colour effect, the attributes and properties of coatings and the best ways to apply them without defects, are key to any professional decorator. Learners will develop the skills necessary to apply these coatings to a variety of surfaces.
Assessment method:	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
Links to Occupational Standard:	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

Learning outcomes

1. Understand creating colour
2. Protect work area
3. Understand coatings and new technologies
4. Prepare and apply coatings by brush and roller

Learning outcome 1

Understand creating colour

Topics	Content elements
1.1 Theory of colour	<p>1.1.1 The principles of colour and how they interrelate</p> <p>a) The elements of the colour wheel:</p> <ol style="list-style-type: none"> i. primary colours ii. secondary colours <p>b) Natural order of colours</p> <p>c) Colour terms:</p> <ol style="list-style-type: none"> i. neutrals ii. warm and cool colours

Topics	Content elements
	<ul style="list-style-type: none"> iii. advancing and receding iv. shades and tints <p>d) Colour schemes:</p> <ul style="list-style-type: none"> i. analogous colours ii. achromatic colours iii. complementary colours iv. monochromatic colours
1.2 Colour organisational systems	<p>1.2.1 Colour organisational systems used in the production of paint</p> <p>a) Systems:</p> <ul style="list-style-type: none"> i. Paint Colours for Building Purposes (BS 4800) ii. RAL Colour standard (RAL) iii. Natural Colour System (NCS)

Learning outcome 2

Protect work area

Topics	Content elements
2.1 Protection of domestic and commercial areas	<p>2.1.1 Materials used to protect items and their suitability in domestic and commercial areas and removal, storage and reinstatement considerations</p> <p>a) Materials:</p> <ul style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill • lightweight plastic • drop • tarpaulin • self-adhesive plastic • hardboard • chipboard • blockboard ii. masking tape types <ul style="list-style-type: none"> • exterior • interior • low tack • 7 day

Topics	Content elements
	<ul style="list-style-type: none"> • various widths <p>b) Domestic areas:</p> <ul style="list-style-type: none"> i. room furniture ii. flooring iii. carpets and curtains iv. door and window furniture v. wall-mounted fixtures and fittings vi. television vii. IT systems viii. lighting <p>c) Commercial areas:</p> <ul style="list-style-type: none"> i. workstations ii. machinery iii. equipment iv. furniture v. lighting <p>d) Removal, storage and reinstatement considerations:</p> <ul style="list-style-type: none"> i. boxing, wrapping materials ii. security of storage facilities iii. prevention of damage during dismantling, storage and reassembly
2.2 Safety considerations when working in domestic and commercial areas	<p>2.2.1 Safety considerations when working in domestic and commercial areas</p> <p>a) Considerations:</p> <ul style="list-style-type: none"> i. public access to premises ii. signs and barriers iii. climate/weather iv. temperature v. ventilation vi. storage vii. fixing of protective materials
2.3 Protect work area	<p>2.3.1 Plan for the protection of work area</p> <p>a) Plan:</p> <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks

Topics	Content elements
	<ul style="list-style-type: none"> iii. produce a tools and resource list iv. interpret information from drawings and specifications <p>2.3.2 Use materials to protect work and surrounding areas prior to the application of paint</p> <ul style="list-style-type: none"> a) Materials <ul style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill • lightweight plastic ii. various width masking tapes

Learning outcome 3

Understand coatings and new technologies

Topics	Content elements
3.1 Coatings and their properties	<p>3.1.1 Water-based coating components, their properties and suitability for use on surfaces</p> <ul style="list-style-type: none"> a) Components: <ul style="list-style-type: none"> i. pigment and extender ii. dispersant or emulsifier iii. additives iv. solvent/thinner v. driers vi. film former vii. epoxy b) Properties: <ul style="list-style-type: none"> i. evaporation ii. coalescence iii. film thickness iv. intumescence v. drying/setting time c) Surfaces: <ul style="list-style-type: none"> i. plaster ii. render iii. wood iv. metal v. plastic

Topics	Content elements
	<p>3.1.2 Solvent-based coating components, their properties and suitability for use on surfaces</p> <p>a) Components:</p> <ol style="list-style-type: none"> i. film former ii. pigment iii. solvent/thinner iv. liquid driers v. additives vi. epoxy <p>b) Properties:</p> <ol style="list-style-type: none"> i. micro-porous ii. thixotropic iii. evaporation iv. oxidation v. polymerisation vi. film thickness vii. intumescence viii. drying/setting time <p>c) Surfaces:</p> <ol style="list-style-type: none"> i. plaster ii. render iii. wood iv. metal v. plastic
<p>3.2 New technologies used in painting and decorating</p>	<p>3.2.1 New technologies and their use in painting and decorating</p> <p>a) New technologies:</p> <ol style="list-style-type: none"> i. nano coatings <ul style="list-style-type: none"> • self-cleaning • anti-scratch ii. environmentally friendly coatings
<p>3.3 Drying processes and stages of coatings</p>	<p>3.3.1 Drying processes for water-based, solvent-based and two-pack coatings and their stages</p> <p>a) Drying process for water-based coatings:</p> <ol style="list-style-type: none"> i. evaporation ii. coalescence <p>b) Drying process for solvent-based coatings:</p>

Topics	Content elements
	<ul style="list-style-type: none"> i. evaporation ii. oxidation iii. polymerisation <p>c) Drying process for two-pack coatings (exothermic)</p> <p>d) Stages of drying process</p> <ul style="list-style-type: none"> i. flow ii. set iii. tack iv. touch dry v. hard dry vi. thorough dry or cured

Learning outcome 4

Prepare and apply coatings by brush and roller

Topics	Content elements
4.1 Types of water and solvent-based coatings	<p>4.1.1 Types of water and solvent-based coatings/paint, their finishes and suitability for use</p> <p>a) Types of coatings/paints:</p> <ul style="list-style-type: none"> i. pigmented ii. non-pigmented iii. stains iv. preservatives v. varnishes vi. emulsions vii. masonry paint viii. two-pack <p>b) Finishes:</p> <ul style="list-style-type: none"> i. matt ii. gloss iii. mid-sheen iv. soft-sheen v. silk vi. eggshell <p>c) Suitability for use:</p> <ul style="list-style-type: none"> i. interior ii. exterior

Topics	Content elements
4.2 Types of tools used for applying coatings and application methods	<p data-bbox="558 280 1473 358">4.2.1 Types of tools, their component parts and their suitability for use in applying coatings/paint</p> <p data-bbox="558 358 1473 1097"> a) Tools and their component parts: <ol style="list-style-type: none"> <li data-bbox="654 425 1473 593">i. rollers <ul style="list-style-type: none"> <li data-bbox="718 470 1473 504">• frame/yoke <li data-bbox="718 515 1473 548">• handle <li data-bbox="718 560 1473 593">• sleeve (material, pile, sizes) <li data-bbox="654 593 1473 862">ii. brushes (sizes, types) <ul style="list-style-type: none"> <li data-bbox="718 638 1473 672">• handle <li data-bbox="718 683 1473 716">• stock <li data-bbox="718 728 1473 761">• ferrule <li data-bbox="718 772 1473 806">• setting <li data-bbox="718 817 1473 862">• filling (natural bristle – solvent-based, synthetic filament – water-based) <li data-bbox="654 862 1473 907">iii. palette knife </p> <p data-bbox="558 929 1473 1097"> b) Suitability for use: <ol style="list-style-type: none"> <li data-bbox="654 974 1473 1019">i. speed of application <li data-bbox="654 1019 1473 1064">ii. scale of application <li data-bbox="654 1064 1473 1097">iii. type of finish required </p> <p data-bbox="558 1120 1473 1176">4.2.2 Ancillary equipment used during application of coatings/paint</p> <p data-bbox="558 1198 1473 1478"> a) Ancillary equipment: <ol style="list-style-type: none"> <li data-bbox="654 1254 1473 1299">i. paint pot/kettle (plastic or metal) <li data-bbox="654 1299 1473 1344">ii. roller tray <li data-bbox="654 1344 1473 1388">iii. roller scuttle <li data-bbox="654 1388 1473 1433">iv. roller extension pole <li data-bbox="654 1433 1473 1478">v. strainer </p> <p data-bbox="558 1500 1473 1579">4.2.3 Application methods and their suitability for use with surface coatings/paint</p> <p data-bbox="558 1601 1473 1982"> a) Methods: <ol style="list-style-type: none"> <li data-bbox="654 1657 1473 1825">i. brush <ul style="list-style-type: none"> <li data-bbox="718 1702 1473 1736">• loading <li data-bbox="718 1747 1473 1780">• laying on <li data-bbox="718 1792 1473 1825">• laying off <li data-bbox="654 1825 1473 1982">ii. roller <ul style="list-style-type: none"> <li data-bbox="718 1870 1473 1904">• loading <li data-bbox="718 1915 1473 1948">• laying on (spreading out) <li data-bbox="718 1960 1473 1982">• laying off (backroll, by brush for solvent-based gloss) </p>

Topics	Content elements
	<ul style="list-style-type: none"> iii. High Volume Low Pressure (HVLV) b) Suitability for use: <ul style="list-style-type: none"> i. speed of application ii. scale of application iii. type of finish required iv. sequencing
<p>4.3 Coating application defects and treatment methods</p>	<p>4.3.1 Types of application and post-application defects, their causes and remedial treatment methods</p> <ul style="list-style-type: none"> a) Application defects: <ul style="list-style-type: none"> i. bittiness ii. misses iii. grinning iv. runs and sags v. excessive brushmarks vi. ropiness vii. fat edges viii. wet edge build-up ix. paint on adjacent surfaces x. roller edge marks xi. roller skid marks xii. irregular cutting in xiii. flashing b) Post-application defects: <ul style="list-style-type: none"> i. retarded drying ii. cratering iii. bleeding iv. blooming v. loss of gloss vi. fading vii. discolouration viii. yellowing ix. cracking x. crazing xi. flaking xii. peeling xiii. cissing c) Causes: <ul style="list-style-type: none"> i. atmospheric conditions ii. application errors

Topics	Content elements
	<ul style="list-style-type: none"> iii. material suitability iv. third party damage v. surface type <p>d) Remedial treatment methods:</p> <ul style="list-style-type: none"> i. stripping ii. solvent wiping iii. dry abrading iv. knotting v. priming vi. stainblock vii. stopping viii. filling ix. washing x. dusting off xi. re-coating
<p>4.4 Cleaning and storage of tools, equipment and materials</p>	<p>4.4.1 Factors to consider when cleaning and storing application tools, equipment and materials</p> <p>a) Factors:</p> <ul style="list-style-type: none"> i. manual handling ii. COSHH iii. VOC iv. disposal of waste v. personal protective equipment (PPE) and respiratory protective equipment (RPE) vi. stock rotation vii. environmental conditions <p>b) Materials:</p> <ul style="list-style-type: none"> i. coatings (paints, preservatives, varnishes, stains, driers) ii. solvents iii. cleaning agents and thinners (white spirit, turpentine) <p>For tools and equipment see 4.2.1 and 4.2.2</p>
<p>4.5 Apply coatings by brush and roller</p>	<p>4.5.1 Plan for the preparation and application of coatings by brush and roller</p> <p>a) Plan:</p> <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list

Topics	Content elements
	<ul style="list-style-type: none"> iv. produce a colour scheme v. interpret information from safety data sheets, drawings and specifications <p>4.5.2 Select and use tools, equipment and materials</p> <p>4.5.3 Select and use appropriate PPE and RPE</p> <p>4.5.4 Prepare solvent and water-based coatings in line with manufacturer's information</p> <p>4.5.5 Apply solvent and water-based coatings to previously painted surfaces, skirting, dado rail, architrave, flush or panelled door, lining, plasterboard, plaster, render, timber</p> <p>4.5.6 Minimise and dispose of waste</p> <p>4.5.7 Clean and store tools and equipment</p> <p>4.5.8 Maintain a safe and clean working environment</p> <p>4.5.9 Review work and check for defects</p> <p>For tools and equipment see 4.2.1 and 4.2.2 For materials see 4.4.1 b)</p>

Unit guidance for delivery

Opportunities for efficiencies in delivery across/between units:

Naturally occurring training activities used to carry out application of surface coatings will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Tutors need to be aware of prior learning that has taken place and use this information to structure individualised learning where appropriate.

Understanding learners' prior learning allows tutors to tailor their teaching methods and materials to meet individual needs and build on learners' existing skills.

Tutors can streamline the learning process, avoiding repetition and focusing on areas where learners need the most improvement. This optimises the use of time and resources, making the learning experience more efficient and rewarding.

Real-life scenarios allow learners to practise in practical settings, building their confidence and competence in real-world situations.

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Group discussions: Divide the class into small groups and assign each group a specific topic related to application methods. Have groups discuss the topic, prepare a short presentation and share their findings with the class.

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<p>Opportunities for visits/engagement with local industry and employers:</p>	<p>Visits to paint manufacturers: Taking learners to visit paint manufacturers allows them to see the production process first hand, understand different types of materials and gain insights into industry standards. It provides a practical understanding of how the products they work with are made and how they can be utilised effectively.</p> <p>Masterclasses by employers: Inviting employers to deliver masterclasses can offer learners a unique opportunity to learn from experienced professionals. Demonstrating good industrial practical skills directly from the employers can inspire and motivate learners to excel in their craft.</p> <p>Visits to suppliers: Arranging visits to outlets where learners can explore the latest range of tools and materials is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best materials for specific projects.</p> <p>National Painting and Decorating Show: Visiting trade shows like the National Painting and Decorating Show can be a fantastic way for learners to connect with industry experts, explore cutting-edge products and gather samples for their projects. Engaging with company representatives provides an opportunity to network and learn about different career paths in the industry.</p> <p>By incorporating these initiatives, tutors can create a well-rounded and immersive learning environment, nurturing learners' passion for painting and decorating and equipping them with practical knowledge to thrive in their future careers. It also fosters collaboration between educational institutions, employers, suppliers and industry events, creating a strong bridge between training and the real world.</p>
<p>Considerations for innovative methods of delivery:</p>	<p>Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self- study, City & Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.</p>
<p>Ways of ensuring content is delivered in</p>	<p>Learners must comply with applicable Building Regulations and choose materials that reduce waste.</p>

line with current, up to date industry practice:

The application of paint can be hazardous if safety is not observed throughout. As well as working at height, there are a range of hazardous materials used in this unit.

Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Method statements must be completed prior to any practical activities taking place. Adequate ventilation and the use of hand protection are paramount.

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Tutors need to be proactive in developing practical, theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.

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Digital assessments: Implement formative online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.

Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.

Mobile apps: Recommend useful painting and decorating related mobile apps that provide tips, tools and design inspiration. These apps can be a practical addition to a learning toolkit.

Augmented Reality (AR): Explore the use of AR technology to overlay digital information on real-world painting and decorating scenarios. AR can provide step-by-step guidance and assist learners in understanding complex concepts.

	<p>Social media integration: Use social media platforms to share updates, industry news and success stories related to painting and decorating. This creates a dynamic learning environment and keeps learners connected to current trends.</p> <p>When incorporating digital initiatives, it is essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging application of surface coatings unit.</p>
Sustainability considerations:	<p>Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to painting and decorating, which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of painting and decorating among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.</p>
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Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate (CSW1)	LO2: 2.3 LO4: 4.5
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience (CSW2)	LO2: 2.3 LO4: 4.5
Uses available software appropriately to present written communication, including numerical information (CSW4)	LO2: 2.3 LO4: 4.5
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication (CSW5)	LO2: 2.3 LO4: 4.5
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role (CW1)	LO2: 2.3 LO4: 4.5
Applies sufficient effort to enable them to complete tasks set to the standard required (CW3)	LO2: 2.3 LO4: 4.5
Demonstrates initiative in carrying out own role (CW4)	LO2: 2.3 LO4: 4.5
Problem solving	
Gathers appropriate information or advice from different sources to help solve a specific work-related problem (PSW1)	LO2: 2.3 LO4: 4.5
Assesses a range of potential solutions, applying appropriate problem-solving strategies (PSW2)	LO2: 2.3 LO4: 4.5
Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem (PSW4)	LO2: 2.3 LO4: 4.5
Self-evaluation	
Identifies strengths and areas for development in an objective and positive way (SEW3)	LO4: 4.5
Uses a self-evaluation tool/checklist appropriately and records reflections/progress (SEW4)	LO4: 4.5
Time management skills	
Plans work:	LO2: 2.3
• according to priority	LO4: 4.5
• taking into account length of time needed to complete tasks	
• in order to meet deadlines (TMS1)	
Works at an appropriate pace to carry out tasks in accordance with plan (TMS2)	LO2: 2.3 LO4: 4.5

Adjusts approach in response to any change of circumstance (eg one task over running), as appropriate, to ensure remaining time is spent effectively **(TMS3)**

LO2: 2.3
LO4: 4.5

Unit 223 Application of wallcoverings to walls and ceilings

Unit level:	2
Guided Learning Hours (GLH):	90
Unit aim:	The purpose of this unit is to provide the learner with the skills and knowledge required to plan and apply various standard papers to walls. They will also develop the knowledge needed to apply standard papers to ceilings. Applying paper is an integral skill required for any professional decorator and used in both the domestic and commercial sectors. Paper can enhance any decorating project. Its application is a skill that requires precision and methodical working, incorporating calculations, measuring and an eye for detail. Understanding paper types, patterns and their respective applications will provide the modern decorator with an invaluable skill and increase their employability status.
Assessment method:	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
Links to Occupational Standard:	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

Learning outcomes

- 1 Understand paper production for wallcoverings
- 2 Understand adhesives for wallcovering application
- 3 Apply standard papers to walls and ceilings

Learning outcome 1

Understand paper production for wallcoverings

Topics	Content elements
1.1 Paper production methods for wallcoverings	1.1.1 Commercial methods used in the production of wallcoverings a) Methods: i. wet embossing ii. dry embossing iii. heat expansion iv. block printing v. screen printing

Topics	Content elements
	<p>vi. machine printing</p> <p>For wallcoverings see 1.2.1</p>
<p>1.2 Types of wallcovering and their suitability for application</p>	<p>1.2.1 Wallcovering types and their suitability for use in a range of locations</p> <p>a) Types:</p> <ol style="list-style-type: none"> i. lining <ul style="list-style-type: none"> • linen backed • non-woven • foil-backed ii. embossed iii. blown vinyl iv. pulps/grounds v. vinyl vi. ready-pasted/pre-pasted vii. borders <p>b) Suitability for use:</p> <ol style="list-style-type: none"> i. humidity ii. durability iii. traffic iv. condition of existing surface <p>1.2.2 Wallcovering pattern types and considerations for their use in a range of locations</p> <p>a) Types:</p> <ol style="list-style-type: none"> i. set/straight match ii. drop/offset match iii. random/free match iv. reverse alternate lengths <p>b) Considerations:</p> <ol style="list-style-type: none"> i. room type ii. dimensions
<p>1.3 Paper labelling</p>	<p>1.3.1 Information provided on wallcovering labels in relation to application procedures and care</p> <p>a) Information:</p> <ol style="list-style-type: none"> i. international performance symbols ii. spongeable iii. washable

Topics	Content elements
	<ul style="list-style-type: none"> iv. super washable v. scrubbable vi. moderate light fastness vii. good light fastness viii. ready-pasted ix. paste-the-wall x. random/free match xi. set/straight match xii. design/distance repeat xiii. drop/offset match xiv. direction of hanging xv. co-ordinated fabric available xvi. reverse alternate lengths xvii. batch number xviii. pattern number xix. hanging instructions xx. paper width size and repeat length

Learning outcome 2

Understand adhesives for wallcovering application

Topics	Content elements
2.1 Types of wallcovering adhesives	<p>2.1.1 Types of adhesives, their characteristics and their use in the application of wallcoverings</p> <ul style="list-style-type: none"> a) Types of adhesives: <ul style="list-style-type: none"> i. cellulose paste ii. starch/starch ether iii. overlap iv. ready-mixed v. PVA b) Characteristics: <ul style="list-style-type: none"> i. ease of application ii. adhesive properties iii. marking quality iv. mould inhibitor v. water content <p>For wallcovering types see 1.2.1</p>
2.2 Defects related to wallcovering adhesives	2.2.1 Defects related to wallcovering adhesives and their causes

Topics	Content elements
	a) Defects: <ol style="list-style-type: none"> i. blisters ii. delamination iii. stretching iv. contamination <ul style="list-style-type: none"> • lumps • bits v. open joints and loose edges b) Causes: <ol style="list-style-type: none"> i. incorrect soaking time ii. incorrect mixing iii. incorrect selection of wallcovering adhesive iv. incorrect application v. incorrect sealing of substrate

Learning outcome 3

Apply standard papers to walls and ceilings

Topics	Content elements
3.1 Planning the application of wallcoverings	3.1.1 Factors to consider when planning the setting out of a wallcovering <ol style="list-style-type: none"> a) Factors to consider: <ol style="list-style-type: none"> i. starting/finishing point on ceilings and walls ii. sequence of operations iii. centring iv. features/obstacles v. internal and external angles (corners and reveals) vi. borders vii. type of finishing paper viii. surface conditions <ul style="list-style-type: none"> • solvent-painted wall • absorbency • movement ix. pattern type and match <ul style="list-style-type: none"> • batches • wastage • shading • repeat x. calculations using girthing and area methods

Topics	Content elements
3.2 Pasting, folding and applying wallcoverings	<p data-bbox="571 280 1396 347">3.2.1 Wallcovering types and considerations when pasting and folding prior to application</p> <ul style="list-style-type: none"> <li data-bbox="619 392 965 660">a) Wallcovering types: <ul style="list-style-type: none"> <li data-bbox="667 436 965 470">i. lining (non-woven) <li data-bbox="667 470 861 504">ii. embossed <li data-bbox="667 504 869 537">iii. blown vinyl <li data-bbox="667 537 909 571">iv. pulps/grounds <li data-bbox="667 571 782 604">v. vinyl <li data-bbox="667 604 821 638">vi. borders <li data-bbox="619 694 1316 929">b) Considerations: <ul style="list-style-type: none"> <li data-bbox="667 739 901 772">i. adhesive type <li data-bbox="667 772 1005 806">ii. calculation of quantity <li data-bbox="667 806 1189 840">iii. fold types (concertina, half and half) <li data-bbox="667 840 1316 929">iv. direction of hanging paper to walls or ceilings (horizontally, vertically) <p data-bbox="571 963 1276 996">3.2.2 Techniques for applying wallcovering adhesives</p> <ul style="list-style-type: none"> <li data-bbox="619 996 837 1120">a) Techniques: <ul style="list-style-type: none"> <li data-bbox="667 1041 837 1075">i. brushing <li data-bbox="667 1075 805 1108">ii. rolling <p data-bbox="571 1153 1412 1187">3.2.3 Factors to consider when applying wallcovering adhesives</p> <ul style="list-style-type: none"> <li data-bbox="619 1232 1220 1467">a) Factors to consider: <ul style="list-style-type: none"> <li data-bbox="667 1276 957 1310">i. pasting procedure <li data-bbox="667 1310 1165 1344">ii. fold lengths using appropriate fold <li data-bbox="667 1344 861 1377">iii. soak times <li data-bbox="667 1377 1220 1411">iv. paste contamination on paper surface <li data-bbox="667 1411 893 1444">v. excess paste <p data-bbox="571 1500 1332 1579">3.2.4 Tools and equipment and their use in wallcovering application</p> <ul style="list-style-type: none"> <li data-bbox="619 1612 1396 1680">a) Setting out (spirit level, tape measure, plumb bob, laser level, chalk line, pencil) <li data-bbox="619 1713 1348 1780">b) Pasting (brush, roller, pasting table, bucket, pasting machine) <li data-bbox="619 1814 1412 1892">c) Application (paper hanger's brush/sweep, spatula, seam roller) <li data-bbox="619 1926 1181 1960">d) Trimming (shears, knife, straight edge)

Topics	Content elements
	<p>e) Access (steps, hop-ups)</p> <p>3.2.5 Wallcovering application methods for walls and ceilings and their use</p> <p>a) Methods:</p> <ol style="list-style-type: none"> i. hanging <ul style="list-style-type: none"> • horizontal • vertical ii. cutting <ul style="list-style-type: none"> • star and envelope cuts • borders to walls with mitre cuts iii. smoothing
<p>3.3 Wallcovering application defects</p>	<p>3.3.1 Wallcovering application defects and their causes</p> <p>a) Defects:</p> <ol style="list-style-type: none"> i. blistering ii. creasing iii. loss of emboss iv. overlapping v. tearing vi. springing joints vii. polished joints viii. shrinking ix. stretching x. open joints xi. loose edges xii. irregular cutting xiii. inaccurate matching xiv. staining and surface marking xv. corners incorrectly negotiated xvi. inaccurate plumbing and levels <p>b) Causes:</p> <ol style="list-style-type: none"> i. overpasting ii. oversoaking iii. careless handling iv. incorrect techniques
<p>3.4 Cleaning and storage of tools, equipment and materials</p>	<p>3.4.1 Factors to consider when cleaning and storing application tools, equipment and materials:</p> <p>a) Factors:</p> <ol style="list-style-type: none"> i. manual handling ii. COSHH

Topics	Content elements
	<ul style="list-style-type: none"> iii. disposal of waste iv. personal protective equipment (PPE) and respiratory protective equipment (RPE) v. storage of materials: <ul style="list-style-type: none"> • stock rotation • racking • wrapping • atmospheric conditions (temperature, dampness, direct sunlight)
<p>3.5 Apply standard papers to walls</p>	<p>3.5.1 Plan for the application of standard papers to walls</p> <p>a) Plan:</p> <ul style="list-style-type: none"> i. produce a method statement ii. identify potential hazards and risks iii. produce a tools and resource list iv. interpret information from safety data sheets, drawings and specifications <p>3.5.2 Select and use tools and equipment</p> <p>3.5.3 Select and use appropriate PPE and RPE</p> <p>3.5.4 Use materials to protect work and surrounding areas prior to the application of papers</p> <p>a) Materials:</p> <ul style="list-style-type: none"> i. protective sheeting types <ul style="list-style-type: none"> • polythene • cotton twill • lightweight plastic ii. various width masking tapes <p>3.5.5 Prepare adhesives in line with manufacturer's information</p> <p>3.5.6 Apply wallcoverings (lining (non-woven), embossed, vinyl, random/free match, set/straight match) to walls (internal and external angles)</p> <p>3.5.7 Cut around ceilings, architrave, skirting, dado rails, sockets and switches</p> <p>3.5.8 Minimise and dispose of waste</p> <p>3.5.9 Clean and store tools and equipment</p>

Topics	Content elements
	3.5.10 Maintain a safe and clean working environment 3.5.11 Review work and check for defects For tools and equipment see 3.2.4

Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate (CSW1)	LO3: 3.5
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience (CSW2)	LO3: 3.5
Uses available software appropriately to present written communication, including numerical information (CSW4)	LO3: 3.5
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication (CSW5)	LO3: 3.5
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role (CW1)	LO3: 3.5
Applies sufficient effort to enable them to complete tasks set to the standard required (CW3)	LO3: 3.5
Demonstrates initiative in carrying out own role (CW4)	LO3: 3.5
Problem solving	
Gathers appropriate information or advice from different sources to help solve a specific work-related problem (PSW1)	LO3: 3.5
Assesses a range of potential solutions, applying appropriate problem-solving strategies (PSW2)	LO3: 3.5
Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem (PSW4)	LO3: 3.5
Self-evaluation	
Identifies strengths and areas for development in an objective and positive way (SEW3)	LO3: 3.5
Uses a self-evaluation tool/checklist appropriately and records reflections/progress (SEW4)	LO3: 3.5
Time management skills	
Plans work: <ul style="list-style-type: none"> • according to priority • taking into account length of time needed to complete tasks • in order to meet deadlines (TMS1) 	LO3: 3.5
Works at an appropriate pace to carry out tasks in accordance with plan (TMS2)	LO3: 3.5
Adjusts approach in response to any change of circumstance (eg one task over running), as appropriate, to ensure remaining time is spent effectively (TMS3)	LO3: 3.5

Unit guidance for delivery

Opportunities for efficiencies in delivery across/between units:

Naturally occurring training activities used to carry out application of wallcoverings will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Tutors need to be aware of prior learning that has taken place and use this information to structure individualised learning where appropriate.

Understanding learners' prior learning allows tutors to tailor their teaching methods and materials to meet individual needs and build on learners' existing skills.

Real-life scenarios allow learners to practice in practical settings, building their confidence and competence in real-world situations. Tutors can streamline the learning process, avoiding repetition and focusing on areas where learners need the most improvement. This optimises the use of time and resources, making the learning experience more efficient and rewarding.

Overall, this approach fosters a learner-centred learning environment, promotes learner success and contributes to a more comprehensive and effective painting and decorating qualification programme. It also recognises and values learners' prior experiences and skills, creating a positive and supportive learning atmosphere.

Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:

Quizzes: Regular quizzes can gauge learner understanding of different application methods. Include multiple-choice, true/false and short-answer questions to cover a range of topics related to wallpapering.

Scenario-based questions: Present real-life scenarios involving different application methods. Ask learners to analyse the scenario, identify potential risks and suggest appropriate safety measures and actions to take.

Group discussions: Divide the class into small groups and assign each group a specific topic related to application methods. Have groups discuss the topic, prepare a short presentation and share their findings with the class.

Peer assessment: This not only reinforces their own understanding but also provides an opportunity for their peers to ask questions and learn from each other.

	<p>Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and best practices for application methods. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.</p>
<p>Opportunities for visits/engagement with local industry and employers:</p>	<p>Visits to wallcovering manufacturers: Taking learners to visit wallcovering manufacturers allows them to see the production process first hand, understand different types of materials and gain insights into industry standards. It provides a practical understanding of how the products they work with are made and how they can be utilised effectively.</p> <p>Masterclasses by employers: Inviting employers to deliver masterclasses can offer learners a unique opportunity to learn from experienced professionals. Demonstrating good industrial practical skills directly from the employers can inspire and motivate learners to excel in their craft.</p> <p>Visits to suppliers: Arranging visits to outlets where learners can explore the latest range of tools and materials is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best materials for specific projects.</p> <p>National Painting and Decorating Show: Visiting trade shows like the National Painting and Decorating Show can be a fantastic way for learners to connect with industry experts, explore cutting-edge products and gather samples for their projects. Engaging with company representatives provides an opportunity to network and learn about different career paths in the industry.</p> <p>By incorporating these initiatives, tutors can create a well-rounded and immersive learning environment, nurturing learners' passion for wallpapering and equipping them with practical knowledge to thrive in their future careers. It also fosters collaboration between educational institutions, employers, suppliers and industry events, creating a strong bridge between training and the real world.</p>
<p>Considerations for innovative methods of delivery:</p>	<p>Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self-study, City & Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.</p>

Ways of ensuring content is delivered in line with current, up to date industry practice:

Learners must comply with applicable Building Regulations and choose materials that reduce waste.

Using wallcoverings can be hazardous, if safety is not observed throughout. As well as working at height, there are a range of hazardous materials used in this unit.

Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Risk assessments, method statements and COSHH assessments must be completed prior to any practical activities taking place. Adequate ventilation and the use of hand protection are paramount.

EDI or accessibility considerations:

Tutors need to be proactive in developing practical, theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.

Digital initiative considerations:

Online resources: Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.

Virtual demonstrations: Conduct virtual wallpapering demonstrations using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.

Simulation software: Utilise wallpapering simulation software that allows learners to practice virtually in a risk-free environment. This provides an opportunity to refine their skills before working with actual materials.

Digital assessments: Implement online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.

Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.

Digital portfolios: Have learners create digital portfolios showcasing their wallpapering projects and progress. This can be a valuable resource for future employment opportunities.

Mobile apps: Recommend useful wallpapering-related mobile apps that provide tips, tools and design inspiration. These apps can be a practical addition to their learning toolkit.

Augmented Reality (AR): Explore the use of AR technology to overlay digital information on real-world wallpapering scenarios. AR can provide step-by-step guidance and assist learners in understanding complex concepts.

Social media integration: Use social media platforms to share updates, industry news and success stories related to wallpapering. This creates a dynamic learning environment and keeps learners connected to current trends.

When incorporating digital initiatives, it is essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging wallpapering unit.

Sustainability considerations:	<p>Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to wallcoverings and adhesives, which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of wallcoverings and adhesives among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.</p>
Books:	<p>Yarde B, Olsen S – The City & Guilds Textbook: Painting and Decorating for Level 1 and Level 2 – (Hodder Education 2020) ISBN 9781398305779</p>
Websites:	<p>https://en.unesco.org/sustainabledevelopmentgoals https://www.paintshow.co.uk/</p>

Appendix 1 Qualification content mapping to Occupational Standard

The table below contains the mapping of the Occupational Standard ST0295 Knowledge, Skills and Behaviours (KSBs) to the City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) (7255-72).

The KSB reference to each unit in this document is not exhaustive.

Unit	Knowledge, Skills and Behaviours (KSBs) reference
101 Health and safety in a construction environment	K1, K2, K3, K4, K6, B1
201 Health, safety and welfare in construction environments	K1, K2, K3, K4, K6, K9, K29 S4 B1
202 Principles of working in the construction industry	K7, K8, K9, K10, K25, K26, K27, K28, K30, K31 S20, S21, S22, S23 B2, B4, B5, B6
220 Access equipment	K1, K2, K3, K4 S1, S3, S4, S5 B1, B3
221 Preparation of surfaces for decoration	K1, K2, K9, K10, K13, K14, K15, K18, K19, K20 S1, S2, S4, S5, S6, S8, S9, S10, S11, S12, S13, S14, S19 B1, B2, B3
222 Application of surface coatings	K1, K2, K5, K7, K9, K10, K11, K12, K13, K16, K23, K24 S1, S2, S4, S5, S6, S7, S8, S9, S10, S15, S16 B1, B2, B3
223 Application of wallcoverings to walls and ceilings	K1, K2, K4, K9, K10, K13, K17, K21, K22 S1, S2, S4, S5, S6, S8, S9, S10, S17, S18, B1, B2, B3

Appendix 2 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 Handbook: 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](#) 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.

The City & Guilds community of brands includes Gen2, ILM, Intertrain, Trade Skills 4U, Kineo and The Oxford Group.

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