QUALIFICATION HANDBOOK

City & Guilds Level 2 Diplomas in Furniture, Furnishings and Wood Machining (5780)

March 2022 Version 1.6

City & Guilds

Qualification at a glance

Subject area	Furniture, Furnishings and Wood Machining
City & Guilds number	5780
Age group approved	All
Assessment	Assignment/multiple choice
Fast track	Available
Support materials	Centre handbook
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds number	Accreditation number
Level 2 Diploma in Furniture Making	5780-20	600/3228/5
Level 2 Diploma in Furniture Finishing Methods	5780-20	600/3191/8
Level 2 Diploma in Furniture Installation	5780-20	600/3201/7
Level 2 Diploma in Furniture Spray Finishing Methods	5780-20	600/3202/9
Level 2 Diploma in Furniture Hand Finishing Methods	5780-20	600/3199/2
Level 2 Diploma in Furnishings - Upholstery	5780-21	600/3194/3
Level 2 Diploma in Furnishings - Soft Furnishings	5780-21	600/3195/5
Level 2 Diploma in Furnishings – Mattress Making	5780-21	600/3196/7
Level 2 Diploma in Furnishings – Modern Upholstery	5780-21	600/3192/X
Level 2 Diploma in Furnishings – Traditional Upholstery	5780-21	600/3193/1
Level 2 Diploma in Wood Machining	5780-22	600/1976/1

Version and date	Change detail	Section
1.1 Sep 2012	Amend UAN – unit 206	**Units**
1.2 March 2017	Centre Devised Guidance	**Assessment**
1.5 August 2017	Added TQT details Deleted QCF	**Qualification at a glance, Structure** **Throughout**
1.6 March 2022	GLH and TQT clarified and highlighted Information on qualifications no longer available added	**Structure**

Contents

1 Introduction

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

Area	Description
Who are the qualifications for?	They are ideal for anyone who is working in, or wants to work, in the furniture, furnishings and wood machining industry.
What do the qualifications cover?	They allow candidates to learn, develop and practise the skills required for employment and/or career progression in the Furniture Making sector.
Are the qualifications part of a framework or initiative?	They serve as a technical certificate in the Furniture, Furnishings and Interiors framework Apprenticeship framework.
What opportunities for progression are there?	Candidates may be able to pursue any of the following opportunities for progression: • Undertake a Level 3 Diploma in Furniture Restoration, Installation, Design & Making, Furnishings and Wood Machining • Undertaking an Advanced Level 3 Apprenticeship in Furniture, Furnishings and Fitted Interiors • Undertake a related Engineering Apprenticeship • Undertaking a Higher/Advanced Diploma in Manufacturing and Product Design, Construction and the Built Environment or the Creative and Media • Undertake Assessor and Verifier qualifications.

Structures

To achieve the **5780-20 Level 2 Diploma in Furniture Making**, learners must achieve **55** credits from the mandatory units. Learners can achieve up to **11** credits from the elective units, but it will not contribute to the qualification.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
A/503/2223	202	Design processes in furniture making	4
Y/503/2214	205	Attaching doors, drawers and fittings in furniture making	3
A/503/5140	206	Furniture making by hand	21
D/503/2151	210	Health and safety within furniture and furnishing making environments	3

Unit accreditation number	City & Guilds unit	Unit title	Credit value
F/503/2174	220	Timber technology in furniture making	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
T/503/2222	229	Sustainability in the timber trade	3
K/503/2220	230	Technical drawings and workshop geometry	7
Elective			
M/503/2221	208	Furniture restoration	8
Y/503/2200	232	Veneering methods in furniture making	3

To achieve the **5780-20 Level 2 Diploma in Furniture Finishing Methods**, learners must achieve **54** credits from the mandatory units. Learners can achieve up to **11** credits from the elective units, but it will not contribute to the qualification.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
T/503/2219	209	Hand finishing methods in furniture making	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
F/503/2174	220	Timber technology in furniture making	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
D/503/2215	228	Spray finishing in furniture making	20
T/503/2222	229	Sustainability in the timber trade	3
Elective			
M/503/2221	208	Furniture restoration	8
Y/503/2200	232	Veneering methods in furniture making	3

To achieve the **5780-20 Level 2 Diploma in Furniture Installation,** learners must achieve **44** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
L/503/2226	201	Creating joints and scribes for furniture installation	10
Y/503/2228	204	Installing fitted furniture and components	12
J/503/2189	207	Furniture making using mechanical fixings	2
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
F/503/2174	220	Timber technology in furniture making	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
T/503/2222	229	Sustainability in the timber trade	3

To achieve the **5780-20 Level 2 Diploma in Furniture Spray Finishing Methods,** learners must achieve **45** credits from the mandatory units. Learners can achieve up to **11** credits from the elective units, but it will not contribute to the qualification.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
Y/503/2214	205	Attaching doors, drawers and fittings in furniture making	3
J/503/2189	207	Furniture making using mechanical fixings	2
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
F/503/2174	220	Timber technology in furniture making	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
D/503/2215	228	Spray finishing in furniture making	20
T/503/2222	229	Sustainability in the timber trade	3
Elective			
M/503/2221	208	Furniture restoration	8
Y/503/2200	232	Veneering methods in furniture making	3

To achieve the **5780-20 Level 2 Diploma in Furniture Hand Finishing Methods**, learners must achieve **39** credits from the mandatory units. Learners can achieve up to **11** credits from the elective units, but it will not contribute to the qualification.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
Y/503/2214	205	Attaching doors, drawers and fittings in furniture making	3
J/503/2189	207	Furniture making using mechanical fixings	2
T/503/2219	209	Hand finishing methods in furniture making	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
F/503/2174	220	Timber technology in furniture making	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
T/503/2222	229	Sustainability in the timber trade	3
Elective			
M/503/2221	208	Furniture restoration	8
Y/503/2200	232	Veneering methods in furniture making	3

To achieve the **5780-21 Level 2 Diploma in Furnishings - Upholstery**, learners must achieve **72** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
F/503/2224	203	Design schemes in furnishings	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
D/503/2232	218	Matching and cutting materials in upholstery and soft furnishings	5
J/503/2225	219	Material technology in furnishings	7
K/503/2217	222	Modern furniture upholstery	13
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
L/503/2209	231	Traditional furniture upholstery	22

To achieve the **5780-21 Level 2 Diploma in Furnishings – Soft Furnishings,** learners must achieve **50** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
F/503/2224	203	Design schemes in furnishings	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
D/503/2232	218	Matching and cutting materials in upholstery and soft furnishings	5
J/503/2225	219	Material technology in furnishings	7
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
M/503/2218	226	Seamed components in furnishings	6
R/503/2227	227	Soft furnishings	7

To achieve the **5780-21 Level 2 Diploma in Furnishings – Mattress Making,** learners must achieve **51** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
F/503/2224	203	Design schemes in furnishings	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
D/503/2232	218	Matching and cutting materials in upholstery and soft furnishings	5
J/503/2225	219	Material technology in furnishings	7
R/503/2230	221	Mattress quilting operations	8
D/503/2229	223	Modern mattress making	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4

To achieve the **5780-21 Level 2 Diploma in Furnishings – Modern Upholstery,** learners must achieve **56** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
F/503/2224	203	Design schemes in furnishings	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
D/503/2232	218	Matching and cutting materials in upholstery and soft furnishings	5
J/503/2225	219	Material technology in furnishings	7
K/503/2217	222	Modern furniture upholstery	13
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
M/503/2218	226	Seamed components in furnishings	6

To achieve the **5780-21 Level 2 Diploma in Furnishings – Traditional Upholstery,** learners must achieve **65** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
F/503/2224	203	Design schemes in furnishings	14
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
D/503/2232	218	Matching and cutting materials in upholstery and soft furnishings	5
J/503/2225	219	Material technology in furnishings	7
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
M/503/2218	226	Seamed components in furnishings	6
L/503/2209	231	Traditional furniture upholstery	22

To achieve the **5780-22 Level 2 Diploma in Wood Machining,** learners must achieve a minimum of **52** credits; **40** credits from the mandatory units and a minimum of **12** credits from the optional units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
Mandatory			
D/503/2151	210	Health and safety within furniture and furnishing making environments	3
K/503/2234	212	Manufacturing wood-based components using jointing machines	7
H/503/2233	213	Manufacturing wood-based components using planing machines	6
M/503/2235	215	Manufacturing wood-based components using profiling machines	7
Y/503/2231	217	Manufacturing wood-based components using sawing machines	6
R/503/2213	224	Planning for career pathways in furniture and furnishing industries	4
H/503/2216	225	Professional responsibilities in furniture and furnishing making environments	4
T/503/2222	229	Sustainability in the timber trade	3
Optional			
T/503/2236	211	Manufacturing wood-based components using CNC machines	6
F/503/2238	214	Manufacturing wood-based components using powered tools	6
A/503/2237	216	Manufacturing wood-based components using sanding machines	6

Total Qualification Time

Total Qualification Time (TQT) is the total amount of time, in hours, expected to be spent by a Learner to achieve a qualification. It includes both guided learning hours (which are listed separately) and hours spent in preparation, study and assessment.

Title and level	GLH	TQT
Level 2 Diploma in Furniture Making	407	550
Level 2 Diploma in Furniture Finishing Methods	435	540
Level 2 Diploma in Furniture Installation	351	440
Level 2 Diploma in Furniture Spray Finishing Methods	351	450

Level 2 Diploma in Furniture Hand Finishing Methods	n/a	n/a
Level 2 Diploma in Furnishings - Upholstery	n/a	n/a
Level 2 Diploma in Furnishings – Soft Furnishings	n/a	n/a
Level 2 Diploma in Furnishings – Mattress Making	n/a	n/a
Level 2 Diploma in Furnishings – Modern Upholstery	n/a	n/a
Level 2 Diploma in Furnishings - Traditional Upholstery	n/a	n/a
Level 2 Diploma in Wood Machining	441	520

The following qualifications are no longer available to new learners:

	City & Guilds number	**Accreditation number**
Level 2 Diploma in Furniture Hand Finishing Methods	5780-20	600/3199/2
Level 2 Diploma in Furnishings - Upholstery	5780-21	600/3194/3
Level 2 Diploma in Furnishings – Soft Furnishings	5780-21	600/3195/5
Level 2 Diploma in Furnishings – Mattress Making	5780-21	600/3196/7
Level 2 Diploma in Furnishings – Modern Upholstery	5780-21	600/3192/X
Level 2 Diploma in Furnishings - Traditional Upholstery	5780-21	600/3193/1

2 Centre requirements

Approval

If your centre is approved to offer the qualification **Level 2 Certificate in Making and Installing Furniture (5610)** you can apply for the new **Level 2 Furniture, Furnishings and Wood Machining** approval using the *Fast Track Approval Form*, available from the City & Guilds website.

Centres should use the fast track form if:

- there have been no changes to the way the qualifications are delivered, and
- they meet all of the approval criteria in the fast track form guidance notes.

Fast track approval is available for 12 months from the launch of the qualification. After 12 months, the Centre will have to go through the standard Qualification Approval Process. The centre is responsible for checking that fast track approval is still current at the time of application.

To offer these qualifications, new centres will need to gain both centre and qualification approval. Please refer to the *Centre Manual - Supporting Customer Excellence* for further information. Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification[s] before designing a course programme.

Resource requirements

Physical resources and site agreements

Centres can use specially designated areas within a centre to assess. The equipment, systems and machinery must meet industrial standards and be capable of being used under normal working conditions.

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 areas 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
- hold the Level 2 Furniture, Furnishings and Wood Machining, or an equivalent qualification
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

Centre staff may undertake more than one role, e.g. tutor and assessor or internal verifier, but cannot internally verify their own assessments.

Assessors and internal verifiers

Centre staff should hold, or be working towards, the relevant Assessor/Verifier (A/V) units for their role in delivering, assessing and verifying these qualifications, or meet the relevant experience requirements outlined above.

Assessor/Verifier (A/V) units are valued as qualifications for centre staff, but they are not currently a requirement for the qualifications.

Continuing Professional Development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Centre staff are also expected to demonstrate their CPD achievement of at least 20 CPD points from the Institute of Books, each year.

Candidate entry requirements

City & Guilds does not set entry requirements for these qualifications. However, centres must ensure that candidates have the potential and opportunity to gain the qualifications successfully.

Age restrictions

There is no age restriction for this qualification unless this is a legal requirement of the process or the environment.

3 Delivering the qualification

Initial assessment and induction

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

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

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

Support materials

The following resource is available for this qualification:

Description	How to access
Developing assignments – guidance for centres	**www.cityandguilds.com**

4 Assessment

This qualification is assessed by a combination of online multiple choice tests and centre and marked assignments covering practical skills and underpinning knowledge. The table below provides details on the assessment methods for each unit.

Unit	Unit title	Assessment method / Where to obtain assessment materials
201	Creating joints and scribes for furniture installation	Assignment, centre devised
202	Design processes in furniture making	Assignment, centre devised
204	Installing fitted furniture and components	Assignment, centre devised
205	Attaching doors, drawers and fittings in furniture making	Assignment, centre devised
206	Furniture making by hand	Assignment, centre devised
207	Furniture making using mechanical fixings	Assignment, centre devised
208	Furniture restoration	Assignment, centre devised
209	Hand finishing methods in furniture making	Assignment, centre devised
210	Health and safety within furniture and furnishing making environments	Multiple choice, **www.cityandguilds.com/5780**
211	Manufacturing wood-based components using CNC machines	Assignment, centre devised
212	Manufacturing wood-based components using jointing machines	Assignment, centre devised
213	Manufacturing wood-based components using planing machines	Assignment, centre devised
214	Manufacturing wood-based components using powered tools	Assignment, centre devised
215	Manufacturing wood-based components using profiling machines	Assignment, centre devised
216	Manufacturing wood-based components using sanding machines	Assignment, centre devised

Unit	Unit title	Assessment method / Where to obtain assessment materials
217	Manufacturing wood-based components using sawing machines	Assignment, centre devised
218	Matching and cutting materials in upholstery and soft furnishings	Assignment, centre devised
219	Material technology in furnishings	Assignment, centre devised
220	Timber technology in furniture making	Assignment, centre devised
221	Mattress quilting operations	Assignment, centre devised
222	Modern furniture upholstery	Assignment, centre devised
223	Modern mattress making	Assignment, centre devised
224	Planning for career pathways in furniture and furnishing industries	Assignment, centre devised
225	Professional responsibilities in furniture and furnishing making environments	Assignment, centre devised
226	Seamed components in furnishings	Assignment, centre devised
227	Soft furnishings	Assignment, centre devised
228	Spray finishing in furniture making	Assignment, centre devised
229	Sustainability in the timber trade	Assignment, centre devised
230	Technical drawings and workshop geometry	Assignment, centre devised
231	Traditional furniture upholstery	Assignment, centre devised
232	Veneering methods in furniture making	Assignment, centre devised

Centre set assignments

Centres must refer to 'Developing assignments – guidance for centres' and the associated assignment development forms which are available to download from **www.cityandguilds.com**.

Example assignments and specific assessment guidance for each unit is also available for this qualification and can be found on **www.cityandguilds.com**.

Approval process for centre set assignments

Centre set assignments must be approved by the external verifier before use. For each assignment, the *Assignment Sign Off Sheet* (AD3) must be completed and be made available to the EV for inspection.

Time constraints

The following must be applied to the assessment of this qualification:

- Candidates must finish their assessment within six months
- Assignments should take no longer than 8 hours. If they do, centres should consider why this is, and make sure that they are not trying to gather too much evidence.

Test specifications

The way the knowledge is covered by each test is laid out in the table below:

Test 1: Unit 210
Duration: 60 minutes

Outcome	Number of questions	%
1. Know health and safety requirements in the workplace	29	72.5
2. Know how to identify hazards and risks in the workplace	11	27.5
Total	**40**	**100**

Centre set and marked assessments

City & Guilds has provided separate guidance for writers of centre based assessments which should be read in conjunction with this document, entitled, ***'GM1 - Developing centre devised assessments –*** *guidance for centre based assessment writers'.*

A set of generic recording forms is also provided as follows:

- *Assessment tasks (AD1)*
- *Assessment grading criteria (AD2)*
- *Assessment sign off form (AD3)*
- *Evidence recording form (GF1)*
- *Assessment unit front and mark sheet (GF2)*
- *Assessment task front sheet (GF3)*
- *Assessment unit mark sheet (GF4)*
- *Assessment feedback and action plan form (GF5)*
- *Qualification assessment tracking form (GF6)*
- *Group assessment tracking form (GF7)*

A full explanation of the use of these forms can be found in the centre devised assessment writing guidance. All of this material is available to download from the City & Guilds website at http://www.cityandguilds.com/delivering-our-qualifications/centre-development/quality-assurance/quality-assurance-documents

5 Units

Availability of units

The following units can also be obtained from the centre resources section of the City & Guilds website, and are also available on The Register of Regulated Qualifications: **http://register.ofqual.gov.uk/Unit**

Structure of units

These units each have the following:

- City & Guilds unit number
- Title
- Unit Accreditation Number (UAN)
- Level
- Credit value
- Recommended Guided Learning Hours (GLH)
- Endorsement by a sector or other appropriate body
- Unit aim(s)
- Learning outcomes which are comprised of a number of assessment criteria
- Range (where applicable)
- Notes for guidance (where applicable).

Unit 201 Creating joints and scribes for furniture installation

UAN:	L/503/2226
Level:	Level 2
Credit value:	10
GLH:	90
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit is introducing learners to joints and scribes for use during installation of furniture and components. The unit requires learners to demonstrate using various joints and scribes industry and have an understanding of the faults that can occur during this part of the process. This unit will also deal with manufacturer's instructions and safe working practices

Learning outcome
The learner will: 1. Know how to joint and scribe components for furniture installation
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe how to select **joints** for tasks 1.4 describe how to mark out **components** 1.5 describe the functions of **tools and equipment** 1.6 state how **characteristics** of materials affect jointing and scribing 1.7 describe fixing **methods** 1.8 describe **quality checking measures** 1.9 describe how to deal with **faults** that occur 1.10 describe **safe working practice**

Range
Terms Tolerance (in the context of these standards a tolerance of +/- 0.5mm would be expected), solid wood and man-made boards, joints and scribes **Joints** Mitre, mason's mitre, straight cuts, scribe

Components

Worktops, plinths, skirting, cornices, pelmets, returns, fillers, end panels

Tools and equipment

Hand tools, power tools, jigs, templates, scribing equipment

Characteristics

Solid wood and man-made boards

Methods

Gluing, pinning, cramping, screwing, mechanical fixings, filling

Quality checking measures

Fit, visual appearance and touch

Faults

Damaged materials and misalignment, incorrect jointing methods, equipment faults, untrue, out of square

Safe working practice

Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA, Personal Protective Equipment PPE)

Learning outcome

The learner will:

2. Be able to joint and scribe components for furniture installation

Assessment criteria

The learner can:

2.1 maintain a tidy work area
2.2 organise tools, jigs, templates, equipment and materials
2.3 create **joints**
2.4 create scribes
2.5 fix **components**
2.6 carry out quality checking measures
2.7 demonstrate how to deal with faults

Range

Joints

Mitre, mason's mitre, straight cuts, scribe

Components

Worktops, plinths, skirting, cornices, pelmets, returns, fillers, end panels

Unit 202 Design processes in furniture making

UAN:	A/503/2223
Level:	Level 2
Credit value:	4
GLH:	22
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is introduce learners to developing designs using design processes. Learners will be required to carry out design processes and present ideas presentation techniques. Learners will understand the circular nature of the design process by continually evaluating ideas against the design brief. The unit will prepare learners for higher level design work required for careers in the furniture industry.

Learning outcome
The learner will: 1. Understand design processes
Assessment criteria
The learner can: 1.1 describe **terms** used in furniture design 1.2 explain the importance of design briefs 1.3 identify types of **information** required from design briefs 1.4 explain **research** that may be required 1.5 describe function lists 1.6 describe the term ergonomics 1.7 describe how initial ideas are developed 1.8 explain **processes** of design development 1.9 describe uses of models 1.10 describe prototypes 1.11 explain the importance of continual evaluation in the design

Range
Terms Brief, prototype, function, models, ergonomics, proportion, form **Information** Function, size, fittings, finishes, aesthetics **Research** Surveys, furniture sizes, books, internet, finishes, legal requirements, economics, proportion **Processes** Design brief, research, functions, initial ideas, prototypes, models, presentation, final ideas, evaluation

Learning outcome
The learner will: 2. Be able to carry out design processes
Assessment criteria
The learner can: 2.1 maintain a tidy work area 2.2 organise tools and equipment for effective working 2.3 carry out design **processes** 2.4 evaluate designs 2.5 present design ideas.

Range
Processes Design brief, research, function lists, initial ideas, models, presentation, final ideas

Unit 203 Design schemes in furnishings

UAN:	F/503/2224
Level:	Level 2
Credit value:	14
GLH:	90
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to research, develop, evaluate, produce and present design schemes in furnishings. The skills covered by this unit include: researching design styles, choice of materials and the influence colour, setting, backdrop has on design schemes. Also includes the evaluation of design schemes and creation of specifications to support media.

Learning outcome
The learner will: 1. Know how to create design schemes in furnishings
Assessment criteria
The learner can: 1.1 describe the **aims** of design schemes 1.2 describe **information** required to create design schemes 1.3 describe different formats of **design schemes** 1.4 outline **processes** of developing design schemes 1.5 explain the importance of researching **products** 1.6 describe **techniques** to meet design scheme objectives 1.7 describe **factors** affecting material choice 1.8 outline how to record data to support **evaluation** decisions 1.9 explain the information that should be included in **specifications**

Range
Aims Purpose, durability, comfort, appearance, budgetary limits **Information** Size, colour, texture, style, setting, lighting, contrast **Design schemes** Mood boards, mock-ups, samples, test pieces, small scale realisation techniques **Processes** Discussion, create shape, colour combinations, material choice, recording, measuring, sketching, adjusting, evaluating, pinning, trimming **Products** Use of materials, current designs, product trends, shapes, styles **Techniques** Preparing, forming, joining, assembling, manipulating, editing, finishing **Factors** Colour, contrast, texture (softness, hardness), cost, availability, function, durability **Evaluation** Performance, function, ease of use, user/audience response **Specifications** Units of measurement, conventions, terms used, formats, material, colour

Learning outcome
The learner will: 2. Be able to create design schemes
Assessment criteria
The learner can: 2.1 research products for design schemes 2.2 create **design schemes** 2.3 evaluate design scheme 2.4 produce specifications from design schemes.

Range
Design schemes Mood board, samples, sketches

Unit 204 Installing fitted furniture and components

UAN:	Y/503/2228
Level:	Level 2
Credit value:	12
GLH:	110
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit is introducing learners to site surveys, preparation and installation of furniture and components. The unit requires learners be able to attach various types of fittings, drawers and doors used within the furniture industry and have an understanding of the faults that can occur during this part of the process. This unit will also deal with manufacturer's instructions and safe working practices when attaching fittings.

Learning outcome
The learner will: 1. Know how to prepare sites for furniture and component installation
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe functions of different **tools and equipment** used in installation 1.4 describe methods for preparing furniture and components 1.5 identify **factors** site surveys indicate 1.6 describe types of **fixing and fitting methods** 1.7 state how characteristics of **materials** affect fastening selection 1.8 describe the importance of preparing sub-assemblies in sequence 1.9 describe **safe working practice**

Range
Terms Drawings, samples, site plans, tolerance, materials, fitting methods, client specification **Tools and equipment** Drills, drivers, SDS drill, impact drivers, jigsaw, snip saw, skill saw, hand tools, router **Methods** Marking out, drilling, boring, screwing, cutting, attach fittings **Factors** Electrical, water, gas, ventilation, communication wires, backgrounds, dimensions, plumb level, square, hazardous substances **Fixing and fitting methods** Blocks, brackets, runners, hinges, screwing, pinning, gluing **Materials** Solid timber, man made board **Backgrounds** Brick, concrete, wood, steel, plaster board, cavity **Safe working practice** Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA, Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Know how to install furniture and components
Assessment criteria
The learner can: 2.1 describe the importance of installing sub-assemblies in sequence 2.2 state how characteristics of backgrounds affect types of fastenings used 2.3 describe **faults** that may occur during installation 2.4 describe how to deal with faults that occur 2.5 describe **quality checking** measures 2.6 describe the process of installing furniture and components 2.7 identify **substances** that may be use

Range
Faults Preparation, Incorrect positioning of panels, alignment, appearance of wood, warping, , damaged materials, incorrect construction methods, equipment faults, untrue, out of square **Quality checking** Fit, visual and touch **Substances** Adhesives, fillers, caulking, silicone, cleaning materials

Learning outcome
The learner will: 3. Be able to install components/furniture in location
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools and equipment for effective working 3.3 prepare **furniture and components** for installation 3.4 demonstrate how to deal with faults 3.5 install furniture and components 3.6 demonstrate **fixing and fitting** methods 3.7 demonstrate quality checking measures

Range
Furniture and components Wall unit, base unit, door, drawer **Fixings and fittings** Blocks, brackets, runners, hinges, screwing, pinning, gluing

Unit 205 Attaching doors, drawers and fittings in furniture making

UAN:	Y/503/2214
Level:	Level 2
Credit value:	3
GLH:	20
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	To be able to attach various types of fittings, drawers and doors used within the furniture industry and have an understanding of the faults that can occur during this part of the process. This unit will also deal with manufacturer's instructions and safe working practices when attaching fittings.

Learning outcome
The learner will: 1. Know how to fit doors, drawers and attach fittings in furniture making
Assessment criteria
The learner can: 1.1 describe the purpose of technical specification 1.2 list **terms** used in technical specifications 1.3 describe functions and uses of **tools and equipment** 1.4 describe handling characteristics of **materials** 1.5 describe **faults** that may lead to rejection of doors or drawers 1.6 describe methods for attaching drawers and doors 1.7 describe functions of **fittings** 1.8 describe how to resolve **fitting faults** 1.9 describe **methods** for attaching fittings 1.10 explain how to quality check 1.11 describe consequences of not carrying out quality checks

Range
Terms Jobs sheet, drawings, components list, tolerance of +/- 0.5mm **Tools and equipment** Sander, scraper, drills, staple gun, pin gun, screw gun, cramps, Marking gauge, tape measure **Materials** Natural timber and wood composites **Faults** Incorrect positioning of panels, alignment, appearance of wood, warping, quality **Fittings** Hinges, mouldings, handles, runners, stops, locks, castors, catches, brackets, action mechanisms, pre-cut glassware **Fitting faults** Re-alignment, return to originator **Methods** Doors and drawers: hinges, runners, handles Fittings: screwing, pinning, bolting, cam and dowel **Safe working practice** Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA, Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Be able to fit doors, drawers and attach fittings in furniture making
Assessment criteria
The learner can: 2.1 maintain a tidy work area 2.2 organise tools and equipment for effective working 2.3 demonstrate resolving faults 2.4 position **fittings** 2.5 attach fittings 2.6 fit doors and drawers 2.7 demonstrate quality checking methods
Range **Fittings**
Hinges, mouldings, handles, runners, stops

Unit 206 Furniture making by hand

UAN:	A/503/5140
Level:	Level 2
Credit value:	21
GLH:	190
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and practical skills to be able to make furniture my hand.. This unit will cover preparing, cutting, jointing and shaping methods as well as working to technical specifications. Learners will be able to respond to the faults in materials and produce quality pieces

Learning outcome
The learner will: 1. Understand the process of furniture making by hand
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe functions of substances used in furniture assembly 1.4 describe functions of **tools and equipment** used in furniture assembly 1.5 describe **defects** in materials that affect selection 1.6 state how **characteristics** of materials affect cutting and handling 1.7 describe different **cutting methods** 1.8 describe different **shaping and moulding methods** 1.9 describe the suitability of materials for different joint constructions 1.10 describe **mechanics** of joint constructions 1.11 describe quality checking measures 1.12 describe how to deal with **faults** that occur 1.13 describe the **assembly** process of furniture

Range
Terms Tolerance (in the context of these standards a tolerance of +/- 0.5mm would be expected), solid wood, man-made boards, joints **Tools and equipment** Hand tools, power tools, jigs, templates, wood machines, workshop devices **Defects** Knots, discolouration, sap, grain, shakes **Characteristics** Solid wood, man-made boards, face-fixing, edge-fixing **Cutting methods** Sawing, planing, chiselling, routing, jointing, scribing **Shaping and moulding methods** Profiling machines, hand tools, power tools **Mechanics** Dovetails, mortice and tenon, tongue and groove, housing, butt, lap **Faults** Jointing, moulding and shaping, cutting, sanding **Assembly** Table, cabinet, box, drawer, door **Safe working practice** Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA, Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Be able to cut, joint, shape and mould materials for furniture making by hand
Assessment criteria
The learner can: 2.1 maintain a tidy work area 2.2 organise tools and equipment for effective working 2.3 cut materials to produce components and joints 2.4 shape and mould components.

Learning outcome
The learner will: 3. Be able to assemble furniture making by hand
Assessment criteria
The learner can: 3.1 assemble components 3.2 carry out quality checking measures 3.3 demonstrate how to deal with faults.

Unit 207 Furniture making using mechanical fixings

UAN:	J/503/2189
Level:	Level 2
Credit value:	2
GLH:	16
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit develops knowledge and understanding of the learner for preparing and assembling furniture using mechanical fixings, giving the learner practical experience in using a variety of fixing methods.

Learning outcome
The learner will: 1. Understand the process of preparing and assembling furniture using mechanical fixings
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe the functions and uses for types of **tools and equipment** used in component assembly 1.4 describe **techniques** for preparation 1.5 describe types of jointing methods using **mechanical fixings** 1.6 state how characteristics of **materials** affect handling 1.7 describe the importance of assembling components in sequence 1.8 describe **substances** that may be used in assembly 1.9 describe quality checking **measures** 1.10 describe how to deal with **faults** that occur

Range
Terms Tolerance (in the context of these standards a tolerance of +/- 0.5mm would be expected), solid wood, man-made boards, mechanical fixings **Tools and equipment** Hand tools, power tools, jigs and templates **Techniques** Filing, sanding, drilling, boring, screwing, marking out **Mechanical fixings** Screws, staples, cam and pin, blocks, pins, bolts, dowels, biscuits **Materials** Solid wood, man-made boards, face-fixing, edge-fixing **Substances** Grease, adhesives, solvents **Measures** Visual and touch **Faults** Damaged materials and fastenings, misalignment, incorrect fastenings, equipment faults

Learning outcome
The learner will: 2. Be able to prepare and assemble furniture using mechanical fixings
Assessment criteria
The learner can: 2.1 maintain a tidy work area, 2.2 organise tools, jigs, templates, equipment and materials 2.3 select components for assembly. 2.4 select mechanical fixings 2.5 assemble components using **mechanical fixings** 2.6 carry out quality checking measures 2.7 demonstrate how to deal with faults

Range
Mechanical fixings
Screws, staples, cam and pin, blocks, pins, bolts, dowels, biscuits

Unit 208 Furniture restoration

UAN:	M/503/2221
Level:	Level 2
Credit value:	8
GLH:	55
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit introduces learners to the principles of furniture restoration. Learners will explore the difference between restoration and conservation and research the history of materials. Learners are required to have experience in furniture making as this unit develops those knowledge and skills in a restoration context

Learning outcome
The learner will: 1. Understand how to carry out restoration on components of furniture
Assessment criteria
The learner can: 1.1 describe the principles of **furniture restoration** 1.2 describe the principles of **furniture conservation** 1.3 identify materials used in different **historical periods** 1.4 describe **factors** for selecting materials in restoration 1.5 describe **terms** used in furniture restoration 1.6 describe the furniture restoration **process** 1.7 describe potential consequences of different cleaning **methods** 1.8 describe the diverse nature of furniture restoration 1.9 describe the **content** of a condition report 1.10 describe **tools and equipment** used during furniture restoration assessment 1.11 identify **safe working practice**

Range
Furniture restoration Like for like, ethical, sympathetic, historical research, useable **Furniture conservation** Preventative care, establish and stop cause of deterioration **Historical periods** 16th Century to 20th Century **Factors** colour, patina, reflectivity, processing marks, thickness of veneers, adhesive, quality, appearance **Terms** Restore, conserve, repair, replicate **Process** Assessment, restoration, finishing **Methods** Water, soap, turpentine, metholated sprits, strippers, cloth, wire wool **Content** Joints stability, surface damage, cause of deterioration/damage **Tools and equipment** Measuring tapes/rules/ metal detectors / dismantling tools – reverse clamps, syringe, hand tools, gluepots **Safe working practice** PPE, legal requirements, Health and Safety at work act (HASAWA), control of substances hazardous to health (COSHH), Risk assessments

Learning outcome
The learner will: 2. Be able to carry out restoration on components of furniture
Assessment criteria
The learner can: 2.1 maintain a tidy work area, organise tools and equipment 2.2 carry out condition reports on items for conservation 2.3 carry out condition reports on items for restoration 2.4 carry out restorations on **joints** 2.5 carry out restorations on **veneers** 2.6 carry out **surface finish** on fittings

Range
Joints Mortice and tenon **Veneers** Wood **Surface finish** Polishing, ageing **Furniture** Boxes, Chair, table, desk, frames **Suitable** Timber type, grain, colour, age **Repairs** Joints, stabilise, splicing, inlaying

Unit 209 Hand finishing methods in furniture making

UAN:	T/503/2219
Level:	Level 2
Credit value:	14
GLH:	120
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and practical skills to be able to prepare furniture and coating materials. This unit will cover preparing work pieces and materials, taking into account the faults that could arise and any application faults with materials. The unit give an awareness of health and safety legislation using data sheets for using and disposing of waste materials.

Learning outcome
The learner will: 1. Understand the process of hand finishing furniture
Assessment criteria
The learner can: 1.1 explain the purpose of technical specification 1.2 list **terms** used in technical specifications 1.3 describe functions **tools and equipment** 1.4 describe functions of **materials** 1.5 describe preparations for **surfaces** 1.6 describe types of **surface changes** 1.7 describe grades of abrasives 1.8 describe types of fillers and stoppers 1.9 describe how to deal with **application faults** 1.10 describe quality checking measures 1.11 describe the **finishing process** 1.12 identify **drying times** 1.13 describe **safe working practice**

Range
Terms Viscosity, colour, formulation, natural, forced, diagrams, colour cards

Tools and equipment

Cloths, brushes, rags, pads, sponges, tak rags, scrapers, sanding blocks, filler knives, steel wool, masking tape, abrasive pads, Sanding equipment, rubbers

Materials

Modern stains, Pre-formulated traditional stains, Sealers, two-pack sealers, primers, shellac sealers, French polishing lacquers, oil, water or mixed solvents, de-greasing agents, cleaning solvents, waxes, stoppers, burnishing creams, bleach, abrasive powders

Surfaces

Solid wood, veneered, flat panels, curved work, Sub assembly or assembly, wood composite

Surface changes

Holes, scratches, chips, dents, cracks, blisters, blemishes

Application faults

Uneven applications, poor wetting, blotching, marking of the surface, drips, runs, streaks, mismatched shading, poor surface finish

Finishing process

Preparation, staining, sealing, final coating

Drying times

Curing, working time, recoating time

Safe working practice

Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA, Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Be able to hand finishing furniture
Assessment criteria
The learner can: 2.1 maintain a tidy work area 2.2 organise tools and equipment for effective working 2.3 demonstrate quality checking methods 2.4 prepare surfaces for finishing 2.5 carry out **hand finishing** process.
Range
Hand finishing

Stains, basecoats, primers, final coats

Unit 210 Health and safety within furniture and furnishing making environments

UAN:	D/503/2151
Level:	Level 2
Credit value:	3
GLH:	18
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit introduces learners to best working practice and the legal responsibilities they have in the workplace. Learners will develop understanding of hazards and how to reduce risks in the workplace. They will understand how to evaluate the severity of risks

Learning outcome
The learner will: 1. Know health and safety requirements in the workplace
Assessment criteria
The learner can: 1.1 state health and safety responsibilities of the individual 1.2 identify relevant **workplace instructions** 1.3 identify **working practices** in a furniture/interiors related workplace with the potential to cause harm 1.4 identify the importance of reporting differences between suppliers, manufacturers or workplace instructions 1.5 describe **safe working practice** in a furniture/interiors related workplace.

Range
Workplace instructions Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA) **Working practice** Use of: machinery, tools, equipments, substances, manual handling, storage, housekeeping **Safe working practice** Use of PPE, risk assessments, observe safe operating procedures, legal requirements

Learning outcome
The learner will: 2. Know how to identify hazards and risks in the workplace
Assessment criteria
The learner can: 2.1 describe **hazards** which may be present in a furniture/interiors related workplace 2.2 explain the importance of remaining alert to the presence of hazards 2.3 explain the importance of dealing with hazards promptly 2.4 describe **risks** which may occur in a furniture/interiors related workplace 2.5 describe the employees **responsibilities** for controlling risks 2.6 describe **risk assessments** 2.7 explain **individual involvement** of employees in risk assessments.

Range
Hazards Activity, area **Risks** Activity, area **Responsibilities** Duty of care, correct personal conduct, observing working practices, legal requirements **Risk assessments** Formal record, document location **Individual involvement** Conduct risk inspection before each task (informal), respond to formal risk assessment

Unit 211 Manufacturing wood-based components using CNC machines

UAN:	T/503/2236
Level:	Level 2
Credit value:	6
GLH:	57
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills, required to set up and operate a range of computer numerical controlled machines to produce computer numerical controlled machine profiles on wood-based components within the relevant sector of industry

Learning outcome
The learner will: 1. Understand the process of setting up and operating computer numerical controlled machines to produce a range of profiles on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce a range of profiles on wood-based components 1.2 describe **characteristics** of wood-based materials that affect selection 1.3 explain how to store **wood-based materials** 1.4 describe the function of **computer numerical controlled machines** 1.5 identify types of **tooling** 1.6 describe the setting up **operations** of computer numerical controlled machines 1.7 describe how wood-based materials are **secured** throughout the machining process 1.8 list a range of **computer numerical controlled machine profiles** and identify the most suitable computer numerical controlled machine for each 1.9 identify relevant **health and safety guidelines** 1.10 identify **problems** in the computer numerical controlled process 1.11 describe how waste material is cleared and disposed of

1.12 outline **maintenance schedules**
1.13 explain program storage methods
1.14 describe modes and functions of keyboards
1.15 describe how to maintain computer numerical controlled machines.

Range

Specifications
Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances

Characteristics
Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties

Wood-based materials
Hardwood, softwood, manufactured board

Computer numerical controlled machines
CNC router, CNC lathe, CNC saw

Tooling
Router cutters, drill bits, saw blades

Operations
Isolation, start up and shut down of machine, handling, fitting and adjustment of tooling, inputting programs, program proving, securing component, fitting and adjustment of tooling, LEV

Secured
Vacuum table, clamps, jigs

Computer numerical controlled machine profiles
Straight, contoured, bored holes, sawn profiles

Health and safety guidelines
Manufacturers' instructions, Health and Safety at Work Act (HASWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP)

Problems
Machine malfunction, component moves off fixing during processing, wood-based component reveals or develops undesirable characteristic during processing

Maintenance schedules
Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate the computer numerical controlled machine safely whilst producing profiles on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select computer numerical controlled machine to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 follow **safe practices** when feeding wood-based components through the computer numerical controlled machine 2.5 feed wood-based components through computer numerical controlled machines at correct speed to obtain the desired surface finish 2.6 produce CNC profiles on wood-based materials 2.7 load and unload components onto work table 2.8 rectify problems as and when they occur 2.9 maintain a tidy work area, organise tools and equipment for effective working

Range
Safe practices Stay outside computer numerical controlled machine enclosure, proximity of body to movable worktable

Unit 211 Manufacturing wood-based components using CNC machines

Supporting information

Unit range

Learner must use at least one CNC machine and produce a selection of CNC profiles listed in the range.

Guidance

Learners at this level are required to operate the machine but are not required to programme the machine.

AC 1.2: Tutors should be aware of timber technology with reference to the characteristics of wood based materials.

AC1.15: Maintenance here refers to cleaning, lubrication and storage, not sharpening.

Unit 212 Manufacturing wood-based components using jointing machines

UAN:	K/503/2234
Level:	Level 2
Credit value:	7
GLH:	67
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills, required to set up and operate a range of jointing machines to produce joints on wood-based components within the relevant sector of industry.

Learning outcome
The learner will: 1. Understand the process of setting up and operating jointing machines to produce a range of joints on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce a range of joints on wood-based components 1.2 describe **characteristics** of **wood-based materials** that affect selection 1.3 explain how to store wood-based materials 1.4 describe the function of **jointing machines** 1.5 identify types of jointing machines 1.6 describe types of **joint cutting tooling** 1.7 describe the setting up **operations** of jointing machines 1.8 describe component **feed and dimensional control devices** 1.9 describe how wood-based materials are **supported** throughout the machining process 1.10 list a range of **joints** and identify the most suitable jointing machines for each 1.11 identify relevant **health and safety guidelines** 1.12 identify **problems** that can occur in the jointing process 1.13 describe how waste material is cleared and disposed of 1.14 outline **maintenance schedules**

Range
Specifications Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances **Characteristics** Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties **Wood-based materials** Hardwood, softwood, manufactured board **Jointing machines** Hollow chisel morticer, tenoning machines either single or double ended, spindle moulder, router machine, dowelling machine **Joint cutting tooling** Hollow chisel, cutting heads, tenoning blocks, scribing cutters, dovetail cutters, housing cutters, straight router cutters, boring bits **Operations** Isolation, start up and shut down of machine, handling, fitting and adjustment of joint cutting tooling, equipment, guards, LEV, use of feed and dimensional control devices **Feed and dimensional control devices** Push sticks, manual feed roller, power feed, sliding table, jigs, auxiliary tables, bed piece and shop made devices **Supported** Extension tables, support rollers, supporting personnel **Joints** Through mortice, stub mortice, haunched mortice, angled mortice: tenon with even shoulders, tenon with long and short shoulders, scribed tenon, dowel joints, finger joints, tongue and groove, dovetail, housing joint **Health and safety guidelines** Manufacturers' instructions, Health and Safety at Work Act (HASWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP) **Problems** Machine malfunction, wood-based component reveals or develops undesirable characteristic during processing

Maintenance schedules
Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate the jointing machine safely whilst producing joints on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select jointing machines to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 demonstrate **safe practices** when hand feeding wood-based components through the jointing machines 2.5 feed wood-based components through jointing machines at correct speed to obtain the desired surface finish 2.6 produce joints on wood-based materials 2.7 rectify problems as and when they occur 2.8 maintain a tidy work area, organise tools and equipment for effective working 2.9 comply with the relevant health and safety guidelines

Range
Safe practices Use of feed and dimensional control devices, position of hands and body in respect of proximity to joint cutting tooling and in the event of component 'kick-back'

Unit 212 Manufacturing wood-based components using jointing machines

Supporting information

Unit range

Learner must produce joints listed in the range and select the appropriate jointing machine. As a minimum they must use the hollow chisel morticer, tenoning machine (either single or double ended) spindle moulder or router.

Guidance

AC 1.2: Tutors should be aware of timber technology with reference to the characteristics of wood based materials.

AC1.15: Maintenance here refers to cleaning, lubrication, storage not sharpening.

Unit 213 Manufacturing wood-based components using planing machines

UAN:	H/503/2233
Level:	Level 2
Credit value:	6
GLH:	54
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills, required to set up and operate a range of planing machines to produce planed profiles on wood-based components within the relevant sector of industry.

Learning outcome
The learner will: 1. Understand the process of setting up and operating planing machines to produce a range of planed profiles on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce planed profiles on wood-based components 1.2 describe **characteristics** of **wood-based materials** that affect selection 1.3 explain how to store wood-based materials 1.4 describe the function of **planing machines** 1.5 identify types of **planer knives** 1.6 describe the setting up **operations** of planing machines 1.7 describe component **feed and dimensional control devices** 1.8 describe how wood-based materials are **supported** throughout the machining process 1.9 list a range of **planed profiles** and identify the most suitable planing machines for each 1.10 identify relevant **health and safety guidelines** 1.11 identify **problems** that can occur in the planing process 1.12 describe how waste material is cleared and disposed of 1.13 outline **maintenance schedules** 1.14 describe how to maintain planer knives.

Range
Specifications Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances **Characteristics** Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties **Wood-based materials** Hardwood, softwood, manufactured board **Planing machines** Handfed surface planer, panel thicknesser (can be combined) **Planer knives** Reusable planer knives, disposable knives **Operations** Isolation, start up and shut down of machine, adjustment of planer knives, tooling and equipment, guards, LEV, use of feed and dimensional control devices **Feed and dimensional control devices** Push block for short or thin wood-based components, power feed, jigs, auxiliary tables and bed piece, shop made devices **Supported** Extension tables, support rollers, supporting personnel **Planed profiles** Face side, face edge, width, thickness, PAR (planed all round), rebate, chamfer, bevel **Health and safety guidelines** Manufacturers' instructions, Health and Safety at Work Act (HASWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP) **Problems** Machine malfunction, wood-based component reveals or develops undesirable characteristic during processing **Maintenance schedules** Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate the planing machine safely whilst producing profiles on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select planing machines to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 demonstrate **safe practices** when hand feeding wood-based components through the planing machines 2.5 feed wood-based components through planing machines at correct speed to obtain the desired surface finish 2.6 produce a **range of planed profiles** on wood-based materials 2.7 rectify problems as and when they occur 2.8 maintain a tidy work area, organise tools and equipment for effective working 2.9 comply with the relevant health and safety guidelines

Range
Safe practices Use of feed and dimensional control devices, position of hands and body in respect of proximity to profile cutter and in the event of component 'kick-back' **Range of planed profiles** Face side, face edge, width, thickness, PAR (planed all round), chamfer, bevel

Unit 213 Manufacturing wood-based components using planing machines

Supporting information

Unit range

Learner must use both handfed surface planer, panel thicknesser (can be combined) and produce all of the planed profiles listed in the range.

Guidance

AC 1.2: Tutors should be aware of timber technology with reference to the characteristics of wood based materials. With regards to the planing of manufactured boards on planing machines here we are referring to edging of manufactured board on hand fed surface planer.

AC1.14: Maintenance here refers to cleaning, lubrication and honing in situ.

Unit 214 Manufacturing wood-based components using powered tools

UAN:	F/503/2238
Level:	Level 2
Credit value:	6
GLH:	54
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills required to produce wood-based components using powered tools within the relevant sector of industry.

Learning outcome
The learner will: 1. Understand the process of setting up and operating powered tools to carry out a range of profiles on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce a range of profiles on wood-based components 1.2 describe **characteristics** of **wood-based materials** that affect selection 1.3 describe storage of wood-based materials 1.4 describe the function of **powered tools** 1.5 identify types of powered tools 1.6 describe **power sources** 1.7 describe types of **consumables** 1.8 describe the setting up **operations** of powered tools 1.9 describe component **dimensional control devices** 1.10 describe how wood-based materials are **supported** throughout the manufacturing process 1.11 list a range of **profiles** and identify the most suitable powered tools for each 1.12 identify relevant **health and safety guidelines** 1.13 identify **problems** in the manufacturing process 1.14 describe how waste material is cleared and disposed of 1.15 outline **maintenance schedules** 1.16 describe how to maintain powered tools.

Range

Specifications

Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances

Characteristics

Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties

Wood-based materials

Hardwood, softwood, manufactured board

Powered tools

Electrical, battery operated and air-powered:-

drill, screw driver, router, sander, jigsaw, portable circular saw, biscuit/loose tongue jointer, power planer, fretsaw, hot air gun, staple gun, angle grinder with wood cutting attachment. bench grinder, drill press, portable local exhaust ventilation (LEV)

Power sources

Mains electricity at 240V, mains electricity stepped down by using a transformer which reduces the voltage to 110V, electricity supplied at 110V (used on all sites and in workshops), electricity supplied by battery to cordless power tools (9–15V) which can be recharged, compressed air tools

Consumables

Drill bits, router cutters, abrasive belt/discs, jigsaw blades, circular saw blades, chop/pull over saw, biscuit/loose tongue jointer cutters and biscuit/loose tongues, power planer knives, fretsaw blades, LEV filter bags

Operations

Isolation, start up and shut down of powered tool, handling, fitting and fixing of consumables, adjustment of tooling and equipment, guards, LEV, use of dimensional control devices

Dimensional control devices

Fences, guides, jigs, auxiliary tables and bed piece, shop made devices

Supported

Bench vice/dogs, clamps & cramps, extension tables, support rollers, trestles, supporting personnel

Profiles

Holes, profiles, contours, sanded finishes, slots

Health and safety guidelines

Manufacturers' instructions, Health and Safety at Work Act (HASWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP)

Problems

Powered tool malfunction, wood-based component reveals or develops undesirable characteristic during processing, component moves off fixing during processing

Maintenance schedules

Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate powered tools safely whilst producing profiles on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select powered tools to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 demonstrate **safe practices** when using powered tools to modify wood-based components 2.5 feed powered tools through wood-based components at correct speed to obtain the desired surface finish 2.6 produce profiles on wood-based materials 2.7 rectify problems as and when they occur 2.8 maintain a tidy work area, organise tools and equipment for effective working 2.9 comply with the relevant health and safety guidelines

Range

Safe practices

Use of feed and dimensional control devices, position of hands and body in respect of proximity to cutting agent

Unit 214 Manufacturing wood-based components using powered tools

Supporting information

Unit range

Learner must use at least six powered tools, one from each machine group to produce all of the profiles listed in the range.

Guidance

AC 1.2: Tutors should be aware of timber technology with reference to the characteristics of wood based materials.

AC 1.15: Maintenance here refers to cleaning, lubrication of moving parts and cutting agent.

Unit 215 Manufacturing wood-based components using profiling machines

UAN:	M/503/2235
Level:	Level 2
Credit value:	7
GLH:	69
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills, required to set up and operate a range of profiling machines to produce profiles on wood-based components within the relevant sector of industry.

Learning outcome
The learner will: 1. Understand the process of setting up and operating profiling machines to produce a range of profiles on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce profiles on wood-based components 1.2 describe **characteristics** of **wood-based materials** that affect selection 1.3 explain how to store wood-based materials 1.4 describe the function of **profiling machines** 1.5 identify types of **profile cutters** 1.6 describe the design of profile cutters 1.7 describe the setting up **operations** of profiling machines 1.8 describe component **feed and dimensional control devices** 1.9 describe how wood-based materials are **supported** throughout the machining process 1.10 list a range of **profiles** and identify the most suitable profiling machines for each 1.11 identify relevant **health and safety guidelines** 1.12 identify **problems** that can occur in the profiling process 1.13 describe how waste material is cleared and disposed of 1.14 outline **maintenance schedules** 1.15 describe how to maintain profile cutters.

Range

Specifications

Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances

Characteristics

Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties

Wood-based materials

Hardwood, softwood, manufactured board

Profiling machines

Vertical spindle moulding machine (straight work) routing machines, wood turning lathe, copy lathe

Profile cutters

Solid profile block, rebate block, wobble saw, flat plate groove saw, adjustable groove head, variable angle bevelling blocks, limited cutter projection tooling, router cutters, copy lathe fixed cutters, turning hand tools

Operations

Isolation, start up and shut down of machine, handling, fitting and adjustment of profile cutters, tooling and equipment, guards, LEV, use of feed and dimensional control devices

Feed and dimensional control devices

Push sticks pressure pads, power feed, sliding table, jigs, auxiliary tables, bed piece, shop made devices

Supported

Extension tables, support rollers, supporting personnel

Profiles

Grooving, rebating, bevelling, contour moulding, stopped profiles, turned profiles

Health and safety guidelines

Manufacturers' instructions, Health and Safety at Work Act (HASWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP)

Problems

Machine malfunction, wood-based component reveals or develops undesirable characteristic during processing

Maintenance schedules
Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate the profiling machine safely whilst producing profiles on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select profiling machines to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 demonstrate **safe practices** when hand feeding wood-based components through the profiling machines 2.5 feed wood-based components through profiling machines at controlled pace to obtain the desired surface finish 2.6 produce profiles on wood-based materials 2.7 rectify problems as and when they occur 2.8 maintain a tidy work area, organise tools and equipment for effective working 2.9 comply with the relevant health and safety guidelines.

Range
Safe practices Use of feed and dimensional control devices, position of hands and body in respect of proximity to profile cutter and moving component in the event of component 'kick-back'

Unit 215 Manufacturing wood-based components using profiling machines

Supporting information

Unit range

Learner must use as a minimum the vertical spindle moulding machine (straight work) and a routing machines to produce a range of profiles with the additional opportunity to use the wood turning lathe, copy lathe.

Guidance

AC 1.2: Tutors should be aware of timber technology with reference to the characteristics of wood based materials.

AC1.15: Maintenance here refers to cleaning, lubrication and storage, not sharpening.

Unit 216 Manufacturing wood-based components using sanding machines

UAN:	A/503/2237
Level:	Level 2
Credit value:	6
GLH:	54
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills, required to set up and operate a range of sanding machines to produce sanded wood-based components within the relevant sector of industry.

Learning outcome
The learner will: 1. Understand the process of setting up and operating sanding machines to produce a range of sanded profiles on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce a range of sanded profiles on wood-based components 1.2 describe **characteristics** of **wood-based materials** that affect selection 1.3 explain how to store wood-based materials 1.4 describe the function of **sanding machines** 1.5 describe different types and grades of **abrasives** 1.6 describe the setting up **operations** of sanding machines 1.7 describe component **feed and dimensional control devices** 1.8 describe how wood-based materials are **supported** throughout the machining process 1.9 list a range of **sanded profiles** and identify the most suitable sanding machines for each 1.10 identify relevant **health and safety guidelines** 1.11 identify **problems** in the sanding process 1.12 describe how waste material is cleared and disposed of 1.13 outline **maintenance schedules** 1.14 describe how to maintain abrasive mediums

Range
Specifications Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances **Characteristics** Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties **Wood-based materials** Hardwood, softwood, manufactured board **Sanding machines** Linisher/disc/bobbin machine, overhead narrow belt sander, wide belt sander, drum sander **Abrasives** Types: belt, disc **Operations** Isolation, start up and shut down of machine, fixing and adjustment of abrasive, tooling and equipment, guards, LEV, use of feed and dimensional control devices **Feed and dimensional control devices** Power feed, sliding table, jigs, auxiliary tables, bed piece, shop made devices **Supported** Extension tables, support rollers, supporting personnel **Sanded profiles** Flat panel, narrow edge, concave, convex **Health and safety guidelines** Manufacturers' instructions, Health and Safety at Work Act (HSWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP) **Problems** Machine malfunction, belt comes off, disc becomes detached, clogging, tearing and shredding of abrasive medium, burning, snaking, glazing, wood-based component reveals or develops undesirable characteristic during processing

Maintenance schedules

Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate the sanding machine safely whilst producing sanded profiles on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select sanding machines to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 demonstrate **safe practices** when hand feeding wood-based components through the sanding machines 2.5 feed wood-based components through sanding machines at correct speed to obtain the desired surface finish 2.6 produce sanded profiles on wood-based materials 2.7 rectify problems as and when they occur 2.8 maintain a tidy work area, organise tools and equipment for effective working 2.9 comply with the relevant health and safety guidelines

Range
Safe practices Use of feed and dimensional control devices, position of hands and body in respect of proximity to sanding medium and in the event of component 'kick-back'

Unit 216 Manufacturing wood-based components using sanding machines

Supporting information

Unit range

Learner must use a disc sander, bobbin sander and belt sander and produce all of the sanded profiles listed in the range.

Guidance

AC 1.2: Tutors should be aware of timber technology with reference to the characteristics of wood based materials.

AC 1.15: Maintenance here refers to cleaning of abrasive medium.

Unit 217 Manufacturing wood-based components using sawing machines

UAN:	Y/503/2231
Level:	Level 2
Credit value:	6
GLH:	57
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to develop the knowledge, understanding and skills, required to set up and operate a range of sawing machines to produce sawn profiles on wood-based components within the relevant sector of industrv.

Learning outcome
The learner will: 1. Understand the process of setting up and operating sawing machines to produce a range of sawn profiles on wood-based components
Assessment criteria
The learner can: 1.1 describe **specifications** used to produce sawn profiles on wood-based components 1.2 describe **characteristics** of **wood-based materials** that affect selection 1.3 explain how to store wood-based materials 1.4 describe the function of **sawing machines** 1.5 identify types of **saw blades** 1.6 describe the design of the saw blades 1.7 describe the setting up **operations** of sawing machines 1.8 describe component **feed and dimensional control devices** 1.9 describe how wood-based materials are **supported** throughout the machining process 1.10 list a range of **sawn profiles** and identify the most suitable sawing machines for each 1.11 identify relevant **health and safety guidelines** 1.12 identify **problems** that can occur in the sawing process 1.13 describe how waste material is cleared and disposed of 1.14 outline **maintenance schedules** 1.15 describe how to maintain saw blades.

Range
Specifications Drawings, specifications, schedules, cutting lists, risk assessments, manufacturers' information, tolerances **Characteristics** Shakes, knots, waney edge, sap, cupping, bowing, springing, twisting, splitting, fungal staining, fungal and insect attack, moisture content, kilning defects, case hardening, timber conversion, working properties **Wood-based materials** Hardwood, softwood, manufactured board **Sawing machines** Narrow bandsaw, band resaw, circular rip saw, dimension saw, radial arm crosscut and trenching saw, wall saw **Saw blades** Bandsaw blade, circular saw blade **Operations** Isolation, start up and shut down of machine, handling, fitting and adjustment of saw blade, tooling and equipment, guards, LEV, use of feed and dimensional control devices **Feed and dimensional control devices** Push sticks, manual feed roller, power feed, sliding table, jigs, auxiliary tables and bed piece **Supported** Extension tables, support rollers, supporting personnel **Sawn profiles** Flat, curved, angled, deep, bevel, compound bevel, rip, cross cut, trench, rebate, groove **Health and safety guidelines** Manufacturers' instructions, Health and Safety at Work Act (HASWA), Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Operations Regulations, Control of Substances Hazardous to Health Regulations (COSHH), Control of Noise at Work Regulations, Electricity at Work Regulations, Personal Protective Equipment Regulations (PPE) and related Approved Codes of Practice (ACOP) **Problems** Machine malfunction, wood-based component reveals or develops undesirable characteristic during processing **Maintenance schedules** Visual inspection, routine maintenance, lubrication schedule, servicing schedule timetable

Learning outcome
The learner will: 2. Be able to operate the sawing machine safely whilst producing sawn profiles on wood based components to specifications
Assessment criteria
The learner can: 2.1 extract data from specifications 2.2 select sawing machines to meet specifications 2.3 carry out setting up operations to meet specifications 2.4 demonstrate **safe practices** when hand feeding wood-based components through the sawing machines 2.5 feed wood-based components through sawing machines at controlled pace to obtain the desired surface finish 2.6 produce sawn profiles on wood-based materials 2.7 rectify problems as and when they occur 2.8 maintain a tidy work area, organise tools and equipment for effective working 2.9 comply with the relevant health and safety guidelines

Range
Safe practices Use of feed and dimensional control devices, position of hands and body in respect of proximity to saw blade and in the event of component 'kick- back'

Unit 218 Matching and cutting materials in upholstery and soft furnishings

UAN:	D/503/2232
Level:	Level 2
Credit value:	5
GLH:	40
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and practical skills to cut materials for use in upholstery and soft furnishings. The skills covered by this unit include: cutting materials, marking and sorting components; maintaining safe working practice.

Learning outcome
The learner will: 1. Understand how to prepare for matching and cutting materials use in upholstery and soft furnishings
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 identify commonly used **materials** 1.4 describe functions of different **tools and equipment** used in cutting material 1.5 outline handling, cutting and laying out characteristics of different types of materials 1.6 identify **safe working practice** when using sharp tools and items of equipment 1.7 describe why components are marked 1.8 state **indicators** that determine when templates and lays are beyond use 1.9 describe waste handling arrangements in the workplace.

Range
Terms Shape, cut, single-lay cutting component, multi-lay cutting component, marking tolerance (in the context of these standards a tolerance of +/- 3mm would be expected) **Materials** Pattern/striped fabrics, plain pile, vinyl, stretch fabrics and flat weave fabrics, natural hide, velvet, finishing materials used in edgings, trimmings and linings and for covering of buttons **Tools and equipment** Knives, shears, scalpels, powered knives, circular cutters, panel cutters, slitting machines **Safe working practice** PPE, legal requirements, Approved Code Of Practice (ACOP) **Indicators** Damaged edges, torn

Learning outcome
The learner will: 2. Understand how to match and cut materials for use in upholstery and soft furnishings
Assessment criteria
The learner can: 2.1 describe why it is necessary to maintain cut components within given tolerances 2.2 describe types of **problems** that may occur during marking out and cutting **materials** 2.3 describe **processes** for dealing with problems 2.4 outline why it is important to match material characteristics 2.5 describe processes of pattern matching 2.6 outline processes of integrating part rolls into lays 2.7 explain which markers to use for different types of materials 2.8 explain how to repair templates 2.9 describe **consequences** of lubricants and debris being left on work surfaces or tools and equipment 2.10 describe the importance of minimising waste 2.11 describe how to protect components from damage 2.12 outline what **information** should be recorded

Range
Arrangements Disposal, recycling, storage **Problems** Material defects, colour/pattern mismatching, defects and faults in templates and lays, blunt or non-functional tools and equipment **Processes** Reject, replace, rectify, report, work around material defects **Materials** Pattern/striped fabrics, plain pile, vinyl, stretch fabrics and flat weave fabrics, natural hide, velvet, finishing materials used in edgings, trimmings and linings and for covering of buttons **Consequences** Damage material **Information** Times, dates, quantities, quality, customer, operator name, batch number

Learning outcome
The learner will: 3. Be able to prepare, match and cut materials for use in upholstery and soft furnishings to specification
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools, equipment and **materials** 3.3 plan marking out and cutting of materials to minimise waste 3.4 mark out and cut materials 3.5 carry out pattern matching 3.6 align templates and lays on material 3.7 cut components according to technical specifications 3.8 select appropriate protection from damage for materials while working.

Range
Materials Pattern/striped fabrics, plain pile, vinyl, stretch fabrics and flat weave fabrics, natural hide, velvet, finishing materials used in edgings, trimmings and linings and for covering of buttons

Unit 219 Material technology in furnishings

UAN:	J/503/2225
Level:	Level 2
Credit value:	7
GLH:	50
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to research material technologies within furnishings. The skills covered by this unit include: researching manufacturing methods, structure and the influence man-made, synthetic and natural mix has on the functionality of materials. Also includes the evaluation of materials, fillings, suspensions, sundries and the creation of specifications.

Learning outcome
The learner will: 1. Understand material technology within furnishings
Assessment criteria
The learner can: 1.1 explain the importance of **product knowledge** 1.2 describe classifications of **fibres** 1.3 describe different uses of **materials** 1.4 describe **processes** to produce materials 1.5 describe **methods** of improving performance of materials 1.6 describe **suspension systems** 1.7 identify uses of **sundries** 1.8 explain the importance of compliance with furniture **safety standards** 1.9 describe **safe working practice**.

Range
Product knowledge Fabrics, fillings, suspension systems, current designs, product trends, shapes, styles **Fibres** Man-made, synthetic, natural **Materials** Fabrics, fillings, suspension systems, sundries **Processes** Extruding, twist, warp, weft, selvedge, curing, carding, weaving, tension, fabrication, catalyst, washing, wire bending, interlinking, pocket, encased **Methods** Percentage yarn mix (man-made: natural), 'Z' and 'S' twist, fire retardancy, repellent, gauge, ratio **Suspension systems** Zigzag, 'fish mouth', sprung unit, hour glass, single cone, double cone, elasticated webbing, rubber webbing, firm edge **Sundries** Thread, zips, press studs, velcro, buttons, lining cloth, tacking strip, studs, staples **Safety standards** Furniture and furnishings (fire safety) regulations, British Standards, CE **Safe working practice** Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA, Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Understand how material technology affects product performance
Assessment criteria
The learner can: 2.1 explain **factors** affecting material choice 2.2 describe the importance of researching materials to support design options 2.3 identify **commercial sizes** of materials 2.4 identify current British and European performance **standards** 2.5 describe **faults** that may be present in materials 2.6 explain how to record data to support **evaluation** decisions 2.7 explain information that should be included in **specifications**.

Range
Factors Cost, durability, firmness, softness, complex shape, fabricated component, stretch, non-stretch, application, tools, training **Faults** Poor quality, natural defects, manufacturing defects **Commercial sizes** Fabric width, hide size, spring gauge, fabricated, non-fabricated, loft, metrical, imperial **Standards** Research establishments, durability, performance of fabrics and foam, dimensional standards **Evaluation** Performance, function, ease of use **Specifications** Units of measurement, conventions, terms used, formats, material, colour **Procedure** Formal, informal, available resources, people involved

Unit 220 Timber technology in furniture making

UAN:	F/503/2174
Level:	Level 2
Credit value:	6
GLH:	50
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit requires learners to identify the characteristics and uses of solid wood and wood based products. The unit looks at the structure, working properties, appearance, stability, colour, grain patterns, drying method and storage of different wood types. Learners will identify sources of solid wood and investigate potential implications of selecting materials for different types of wood.

Learning outcome
The learner will: 1. Understand the material technology of solid wood
Assessment criteria
The learner can: 1.1 identify **characteristics** of solid timber 1.2 describe types of **solid timber** used in the furniture industry 1.3 describe **reasons** for using for different types of solid timber 1.4 describe potential **defects** in solid timber 1.5 describe **problems** that may occur when working with hardwood 1.6 describe **storage requirements** for solid timber 1.7 describe solid wood **sustainability** 1.8 identify **commercial sizes** of solid timber 1.9 describe **sources** of commercially sized solid timber 1.10 explain how different **surface finishes** react with solid timber 1.11 describe **safe working practice**

Range
Characteristics Structure, working properties, appearance, stability, colour, grain patterns, kiln dried, air dried, staining, , finishing, limitations **Solid timber** Softwood: douglas fur, pine, hemlock Hardwood: beech, ash, oak, mahogany, birch, maple, sycamore, teak **Reasons** Exterior use, interior use, compression strength, tensile strength, durability, insect resistance **Defects** Cupping, twisting, bowing, shakes, dead knots, live knots, cracks, splits, grain defects, case hardening, insect infestation **Problems** Corrosion of fittings, staining to fittings, damage to tools, skin irritation, respiratory issues **Storage requirements** Clean, dry, well ventilated, kept flat, separated, covered **Sustainability** Source, ethical, recycling, waste disposal **Commercial sizes** Millimetres, metres, cubic metres **Sources** Specialist suppliers, abroad, home grown materials, sustainable **Surface finishes** Stains, lacquers, varnishes, oils, paints, exterior wood preservatives, natural, pressure impregnated **Safe working practice** Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA), Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Understand the material technology of timber based products
Assessment criteria
The learner can: 2.1 identify **characteristics** of **timber based products** 2.2 describe types of timber based products used in the furniture industry 2.3 describe **reasons** for using for different types of timber based products 2.4 describe potential **defects** in timber based products 2.5 describe **problems** that may occur when working with timber based products 2.6 describe **storage requirements** for timber based products 2.7 describe wood based product sustainability 2.8 identify **commercial sizes** of timber based products 2.9 explain how different **surface finishes** react with timber based products 2.10 describe manufacturing techniques of timber based products

Range
Characteristics Working properties, appearance, stability, colour, grain patterns, structure, finishing, limitations **Timber based products** Plywood, chipboard, MDF **Reasons** Interior use, durability, insect resistance, heat resistance, water resistance, stability, ease of application, cost, available **Defects** Pressing faults, veneering faults **Problems** Damage to tools, skin irritation, respiratory issues, carcinogenic, holding properties of fixings **Storage requirements** Clean, dry, well ventilation, kept flat, separated, indoors **Commercial sizes** Millimetres, metres, sheet sizes **Surface finishes** Stains, lacquers, varnishes, oils, paints, natural

Unit 221 Mattress quilting operations

UAN:	R/503/2230
Level:	Level 2
Credit value:	8
GLH:	75
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to prepare and produce quilting for mattresses using machines. The skills covered by this unit include: preparing the work area and equipment, selecting materials and using machinery to carry out quilting operations.

Learning outcome
The learner will: 1. Know how to prepare mattress quilting equipment
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe handling characteristics of **materials** 1.4 describe purposes of materials 1.5 explain how to protect mattresses from damage during quilting preparation 1.6 describe how to **prepare** for quilting 1.7 describe the **function** of equipment used in quilting process 1.8 describe **faults** that may occur during quilting preparation 1.9 identify **safe working practice** in mattress preparation 1.10 describe **safety functions** on quilting machines

Range
Terms Material, quilting dimensions, pattern, type, weight and size of filling, layer sequence, quality to be achieved, tolerance, visual appearance **Materials** Fabric, foam, tick, backing, backing thread, cotton, felt, wool, coir pad **Prepare** Machine start-up, quality check **Function** One and two headed **Faults** Tools and equipment faults, quality, application, positioning **Safe working practice** PPE, legal requirements, Approved Code of Practice (ACOP), Health and Safety At Work Act (HASAWA), Control of Substances Hazardous to Health (COSHH), Risk Assessments **Safety functions** Interlocking guards, emergency stop, foot guard

Learning outcome
The learner will: 2. Know how to quilt mattresses
Assessment criteria
The learner can: 2.1 describe the **quilting process** 2.2 state when to use different **methods** for quilting mattresses 2.3 explain how to **monitor** the quilting operation 2.4 describe the importance of minimising waste 2.5 describe **faults** that may be encountered during quilting 2.6 explain **processes** for dealing with faults 2.7 describe **quality checking** measures

Range
Quilting process Operation of equipment, machine shut-down, sequence of processing **Methods** Panels, borders, rolls, deep quilting **Monitor** Touch, feel, visual **Faults** Material defects, application, positioning, colour/pattern mismatching, non functional equipment, tensioning, shape and size, stitching errors, re-threading, re-needling **Processes** Reject, replace, rectify, report, work around material defects **Quality checking** Visual, measurement

Learning outcome
The learner will: 3. Be able to quilt mattresses
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools, equipment and materials 3.3 select appropriate protection for items while working 3.4 operate quilting machines 3.5 carry out quality checks

Range
Furniture and components Wall unit, base unit, door, drawer **Fixings and fittings** Blocks, brackets, runners, hinges, screwing, pinning, gluing

Unit 222 Modern furniture upholstery

UAN:	K/503/2217
Level:	Level 2
Credit value:	13
GLH:	130
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to prepare and produce items of modern upholstery. The skills covered by this unit include: preparing the frame, application of suspensions and filling materials, positioning and securing upholstery covers, positioning and securing trimmings and finishings, fastening bottom cloth firmly and accurately

Learning outcome
The learner will: 1. Understand how to prepare items of modern upholstery
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe functions of **tools and equipment** used in modern upholstery 1.4 state **indicators** that determine equipment fault 1.5 explain how to overcome equipment faults 1.6 describe **purposes** of **support materials** 1.7 outline handling characteristics of support materials 1.8 state indicators that determine **support material faults** 1.9 describe how to protect **items** from damage 1.10 identify **safe working practice** when using tools and equipment in modern upholstery

Range
Terms Material type, quality level, tolerance, visual appearance **Tools and equipment** Hammers, staple gun, frame gun, spring gun, staple remover, knives, shears, scalpels, stretching device **Indicators** Non-functional **Purposes** Structure, shape, comfort **Support materials** Suspensions , springs, elasticated webbing, support materials (webbing, foam, wadding, rubberised hair, insulation pad), edgings **Support material faults** Damage, incomplete **Items** Modern furniture, contract furniture, office furniture **Safe working practice** PPE, legal requirements, Approved Code of Practice (ACOP)

Learning outcome
The learner will: 2. Understand how to fit material and finish items of modern upholstery
Assessment criteria
The learner can: 2.1 describe handling characteristics of **upholstery covers** 2.2 describe different **methods** of securing upholstery covers 2.3 describe types of **problems** that may occur during fitting upholstery covers to items 2.4 describe the importance of minimising waste 2.5 explain the purpose of using a bottom cloth 2.6 list **fittings** used in modern upholstery 2.7 describe handling characteristics of **trimmings and finishings** 2.8 explain methods of securing trimmings and finishings 2.9 describe problems that may occur during fitting of trimmings and finishings 2.10 describe **processes** for dealing with problems 2.11 describe **quality checks** for completed items

Range
Upholstery covers Patterned/striped, plain pile, vinyl, stretch fabrics, flat weave fabrics, natural hide, velvet **Methods** Stapling, temporary tacks, tacks, centring, 'v'-cut, 'Y'-cut, measuring, hand stitching, adhesives **Fittings** Castors, bun feet, legs, glides, mechanical actions **Problems** Material defects, colour/pattern mismatching, non functional equipment, tensioning, shape and size, stitching errors **Trimmings and finishings** Braide, piping, fringe, polished wood borders **Processes** Reject, replace, rectify, report, work around material defects **Quality checks** Visual, measurement

Learning outcome
The learner will: 3. Be able to produce items of modern upholstery
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools, equipment and materials 3.3 check materials meet technical specification 3.4 select appropriate protection for the item while working 3.5 produce items of modern upholstery 3.6 demonstrate quality checks.

Unit 223 Modern mattress making

UAN:	D/503/2229
Level:	Level 2
Credit value:	6
GLH:	60
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to prepare and produce mattresses. The skills covered by this unit include: preparing the mattress assembly, application of suspensions and filling materials to form the shape, positioning and securing top covers, tufting/finishing, tape edging.

Learning outcome
The learner will: 1. Know how to prepare mattresses for assembly
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe handling characteristics of **support materials** 1.4 describe purposes of different support materials 1.5 describe **methods** used in mattress preparation 1.6 describe **functions** of different tools used in mattress preparation 1.7 describe **faults** that may occur during mattress preparation 1.8 identify **safe working practice** during mattress preparation.

Range

Terms

Material to be used, quality, tolerance, dimensions, visual appearance, filling type, item type

Support materials

Foam, springs, foam encapsulated suspension units, fillings, panels, pads, single fillings, multi fillings/layered fillings

Methods

Stapling, hog-ringing, gluing, side blind, top stitching, roll stitching

Function

Hog ring gun, glue gun, staple gun

Faults

Tools and equipment, quality, application, positioning

Safe working practice

PPE, legal requirements, Approved Code of Practice (ACOP), Health and Safety At Work Act (HASAWA), Control of Substances Hazardous to Health (COSHH), Risk Assessments

Learning outcome
The learner will: 2. Know how to assemble mattresses
Assessment criteria
The learner can: 2.1 describe handling characteristics of **finishing materials** 2.2 describe **functions** of different tools used in finishing mattresses 2.3 describe **methods** for assembling mattresses 2.4 describe **faults** that may occur during assembly process 2.5 describe the importance of minimising waste 2.6 describe **processes** for dealing with problems 2.7 describe **quality checking measures**

Range
Finishing materials Top fabric, twine, pre-formed tufts, thread, tape edging, filler cord **Function** Tufting machine, tape edging **Methods** Mattress positioning, vertical application, alignment, tape edging, tufting **Faults** Material defects, colour/pattern mismatching, non functional equipment, tensioning, shape, size, stitching errors, broken thread, broken needle **Processes** Reject, replace, rectify, report, work around material defects **Quality checking measures** Visual, measurement

Learning outcome
The learner will: 3. Be able to produce mattresses
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools, equipment and materials 3.3 check materials meet technical specification 3.4 select appropriate protection for the item while working 3.5 produce mattresses 3.6 demonstrate tape edging 3.7 demonstrate tufting 3.8 demonstrate quality checks.

Unit 224 Planning for career pathways in furniture and furnishing industries

UAN:	R/503/2213
Level:	Level 2
Credit value:	4
GLH:	25
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit will introduce learners to the concept of planning for own career development and setting goals to help realise plans. Learners will investigate the roles in the Furniture and Furnishing industries and research specific requirements. Learners are required to compile documents to support career plans including Curriculum Vitaes and personal statements. The unit is designed to demonstrate to learners that there are many optional career pathways including becoming highly skilled in own craft or exploring

Learning outcome
The learner will: 1. Know how to plan for careers in furniture and furnishing industries
Assessment criteria
The learner can: 1.1 identify **sources** to support career planning 1.2 describe **elements** of career planning 1.3 describe **specific requirements** for career choices 1.4 describe **documents** to support career development 1.5 explain the **principles** of goal setting 1.6 describe how to set **goals** 1.7 describe **careers** in furniture and furnishing industries 1.8 explain **opportunities for progression** within careers 1.9 identify **types** of employment

Range
Sources People, organisations, internet, publication, professional bodies/organisations, educational support and guidance, independent research, mentors, job descriptions, role models, job centres **Elements** Goal setting, qualifications,, Curriculum Vitae (CV), person specification, aspirations **Specific requirements** Qualifications, experience **Documents** Curriculum Vitae (CV), personal statement, portfolio, cover letter, references, business plans **Principles** SMART targets **Goals** Short, medium, long **Careers** Veneerer, Upholsterer, Soft Furnisher, Furniture Maker, Fitted Furniture Installer, Furniture Restorer, Designer, Wood Machinist, Teacher **Opportunities for progression** Supervisor, manager, highly skilled in craft, sideways moves, teacher **Types** Own business, employed, small company, large company, casual labour, contract work, private, bespoke, batch production, mass production

Learning outcome
The learner will: 2. Be able to produce plans for careers in furniture and furnishing industries
Assessment criteria
The learner can: 2.1 research requirements for careers in furniture and furnishing industries 2.2 set personal **goals** for careers in furniture and furnishing industries 2.3 produce **documents** to support career development.

Range
Goals Short, medium, long **Documents** Curriculum Vitae (CV), personal statement, portfolio, cover letter, references

Unit 224 Planning for career pathways in furniture and furnishing industries

Supporting information

Guidance

Professional organisations that may support learners to investigate career pathways:

- Society of Design Craftsmen (SoDC)
- Furniture Designer Makers Association (FDMA)
- The Furniture Maker Company (WCFM)
- British Antique Furniture Restorer Association (BAFRA)
- British Contract Furniture Association (BCFA)
- British Furniture Makers (BFM)
- Association of Master Upholsterers (AMV)
- Worshipful Company of Upholsterers (WCU)
- British Woodwork Federation (BWF)
- Crafts Council
- Proskills (Sector Skills Council)
- Educational establishments

Unit 225 Professional responsibilities in furniture and furnishing making environments

UAN:	H/503/2216
Level:	Level 2
Credit value:	4
GLH:	30
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	This unit introduces learners to customer service and communication skills giving them the tools to build positive relationships with clients and colleagues. This unit also explores the importance of teamwork and supporting colleagues in a furniture and furnishing making environment. The unit explores workshop etiquette, requiring candidates to understand the importance of their own role and meeting timescales within a process and the cost implications associated with this. This unit is intended to equip learners for working in a commercial environment.

Learning outcome
The learner will: 1. Understand the importance of professional standards in a furniture and furnishing making environment
Assessment criteria
The learner can: 1.1 outline **factors** which contribute to good working relationships 1.2 describe **how** colleagues can assist one another 1.3 state **situations** which would require assistance from a colleague 1.4 explain the **importance of teamwork** 1.5 describe how to **communicate effectively** 1.6 explain the **importance of effective communication** 1.7 describe common **causes** of client complaints.

Range
Factors Positive behaviour, quick and effective response to feedback, patience, sense of humour, pleasant manner, self organisation, eye contact, respect for self and others and a willingness to co-operate, learn and work as a team **How** Advice, assistance, support, constructive feedback, sharing experience and ideas **Situations** Situations beyond own level of knowledge and responsibility, aggressive and angry clients, accidents, injuries and emergencies, specific needs **Importance of teamwork** Portray organisation/business in a positive way, effective and efficient delivery of services for customers and staff, safety, staff morale, encourages loyalty, achieving targets **Communicate effectively** Body language, eye contact, listening, clear response. remembering names, consideration for languages and cultures, being polite, method of communication to suit client need, visual communication **Importance of effective communication** Building relationships, gain respect from others, improved perception, preparing for employment, achieving desired result **Causes** Poor customer service, not meeting the technical specification, delay to work being produced, poor communication, poor quality of work

Learning outcome
The learner will: 2. Understand professional working practices in furniture and furnishing making environments
Assessment criteria
The learner can: 2.1 describe **safe working practice** 2.2 describe how to minimise waste 2.3 describe the importance of keeping furniture and furnishing making environments tidy 2.4 describe **quality checking measures** 2.5 explain the **importance** of meeting timescales 2.6 identify **who to inform** of delay to timescales 2.7 identify key **paperwork** to complete in furniture and furnishing making environments 2.8 describe **cost implications** in furniture and furnishing making environments.

Range

Safe working practice

PPE, legal requirements, Approved Code of Practice (ACOP), Health and Safety At Work Act (HASAWA), Control of Substances Hazardous to Health (COSHH), Risk Assessments

Quality checking measures

Square, dimensions, visual, touch, ergonomics, functionality, against technical specification requirements, finish

Importance

Delay to overall process, impact production line, delay to end product, financial reward, financial penalties, client relations

Who to inform

Supervisor, next part of process, team leader

Paperwork

Job recording sheet, equipment inventory, cutting list

timesheet

Cost implications

Direct, indirect

Unit 226 Seamed components in furnishings

UAN:	M/503/2218
Level:	Level 2
Credit value:	6
GLH:	58
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to produce simple and complex seamed components for use in furnishings, by hand and through the use of machinery. The skills covered by this unit include: preparing components and materials; stitching seams to specification; preparing materials before and after stitching to achieve specification and maintaining your own and others' safety

Learning outcome
The learner will: 1. Understand how to identify and prepare equipment for use in furnishings
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe the consequences of lubricants or debris getting onto materials 1.4 identify **safe working practice** when using sewing machines 1.5 describe the **functions** of different types of sewing equipment used in furnishings 1.6 state the **indicators** that determine equipment fault 1.7 explain how to resolve equipment faults 1.8 explain the importance of carrying out test sews.

Range
Terms Straight, shaped, complex, symmetrical, asymmetrical, pleating, ruching, quilting, fastenings, Velcro, cords and piping, seam allowance , stitch density and structure **Safe working practice** PPE, legal requirements, Approved Code of Practice (ACOP) **Functions** Foot, needle, lockstitch machine, long arm machine, twin needle machine, overlock machine, multi needle machine, thread spools, pins, tailor's chalk, upholstery needle, upholstery skewer, pressing equipment **Indicators** Loose threads, gathering, thread breakage, tensioning, needle breakage, thread change, empty spool, stitch density

Learning outcome
The learner will: 2. Understand how to produce seamed components, for use in furnishings
Assessment criteria
The learner can: 2.1 outline handling characteristics of **materials** 2.2 describe **problems** that may occur during the sewing of materials 2.3 outline **processes** for dealing with problems 2.4 describe **stitching** methods used in furnishing 2.5 describe **methods** of completing seams 2.6 describe the importance of sewing in sequence 2.7 describe the importance of minimising waste 2.8 describe how to protect components from damage 2.9 outline **information** to be recorded when producing seamed components 2.10 describe why recording information is important.

Range
Materials Patterned/striped, plain pile, vinyl, stretch fabrics, flat weave fabrics, natural hide, velvet **Problems** Material defects, colour/pattern mismatching, defects and faults in templates and lays, non functional equipment, tensioning, shape and size, stitching errors **Processes** Reject, replace, rectify, report, work around material defects **Stitching** Hand, machine **Methods** Trimming, notching, basting stitches **Information** Times, dates, quantities, quality, customer, operator name, batch number

Learning outcome
The learner will: 3. Be able to produce seamed components, for use in furnishings
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools, equipment and **materials** 3.3 set up sewing machines 3.4 check materials match technical specifications 3.5 complete test stitching 3.6 sew and press components 3.7 complete seam allowance and density to technical specification 3.8 select appropriate protection for the material from damage.

Range
Materials Patterned/striped, plain pile, vinyl, stretch fabrics, flat weave fabrics, natural hide, velvet

Unit 227 Soft furnishings

UAN:	R/503/2227
Level:	Level 2
Credit value:	7
GLH:	60
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to produce simple components for use in soft furnishings, by hand and through the use of machinery. The skills covered by this unit include: component measuring and recording, marking and cutting materials; stitching seams to specification; fitting and fixing in location; preparing materials before and after stitching to achieve specification and maintaining safety

Learning outcome
The learner will: 1. Understand how to prepare components, for use in soft furnishings
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 outline **data** required for component dimensions 1.4 describe processes for cutting **components** for sewing 1.5 describe **functions** of equipment used in soft furnishings 1.6 state the **indicators** that determine equipment fault 1.7 explain how to resolve equipment faults 1.8 describe consequences of lubricants or debris getting onto materials 1.9 identify **safe working practice** when using sewing machines 1.10 explain the importance of compliance with furniture **standards**

Range
Terms Cutting tolerance (+/- 5mm), straight, shaped, complex, symmetrical, asymmetrical, pleating, ruching, cords, piping **Data** Seam allowance, measurement, dimension, format, markers, aligning, pattern repeat, pile direction, template **Components** Loose cover, balloon lined lampshade, lined curtains, cushions, table treatments, bed treatments **Functions** Sewing machines, cloth tape measure, tailors chalk, pins, needle, thread, pressing equipment **Indicators** Loose threads, gathering, thread breakage, tensioning, needle breakage, thread change, empty spool, stitch density **Safe working practice** PPE, legal requirements, Approved Code of Practice (ACOP) **Standards** Furniture and furnishings (fire safety) regulations, British Standard, CE

Learning outcome
The learner will: 2. Understand how to produce components, for use in soft furnishings
Assessment criteria
The learner can: 2.1 outline handling characteristics of **materials** 2.2 describe processes for **joining** components 2.3 describe **problems** that may occur during sewing of materials 2.4 outline **processes** for dealing with problems 2.5 describe **stitching** methods used in soft furnishings 2.6 describe **methods** of completing seams 2.7 describe the importance of sewing in sequence 2.8 describe different **finishing methods** 2.9 describe the importance of minimising waste 2.10 outline **information** to be recorded when producing soft furnishings 2.11 describe why recording information is important

Range

Materials

Patterned/striped, plain pile, vinyl, stretch fabrics, flat weave fabrics, velvet, lining cloth

Joining

Velcro, zips, button holes, ties, press studs, orientation

Problems

Material defects, colour/pattern mismatching, defects and faults in templates and lays, non functional equipment, tensioning, shape and size, stitching errors, seam slippage

Processes

Reject, replace, rectify, report, work around material defects

Stitching

Hand, machine

Methods

Trimming, notching, basting stitches, slip stitch, ladder stitch, hemming stitch, flat, french, flat fell

Finishing methods

Piping, braids, fringes, cords, flange cords, pleating, gathering, appliqué, tucks, smocking and skirts

Information

Times, dates, quantities, quality, customer, operator name, batch number

Learning outcome

The learner will:

3. Be able to prepare and produce components, for use in soft furnishings

Assessment criteria

The learner can:

3.1 maintain a tidy work area

3.2 organise tools, equipment and materials

3.3 record measurements of **components**

3.4 prepare components for use in soft furnishings

3.5 assemble components for use in soft furnishings

3.6 select protection from damage for **materials**

Range

Components

Loose cover, lamp shade, curtains

Materials

Patterned/striped, velvet, flat weave

Unit 228 Spray finishing in furniture making

UAN:	D/503/2215
Level:	Level 2
Credit value:	20
GLH:	180
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and practical skills to spray finish furniture. This unit will cover preparing work pieces and materials, taking into account surface faults and any application faults with materials. The unit will also cover Health & Safety legislation using technical specifications and the disposing of waste materials.

Learning outcome
The learner will: 1. Know the process of preparing to spray finish furniture
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specification 1.3 describe functions of **tools and equipment** used in spray finishing 1.4 describe functions of **materials** used in spray finishing 1.5 describe different grades of **abrasives** 1.6 explain uses of fillers and stoppers 1.7 explain different preparations for **surfaces** 1.8 describe **surface faults** in timbers 1.9 describe **safe working practice**.

Range
Terms Viscosity, colour, formulation, natural, forced, precat, AC, PU, curing, data sheets **Tools and equipment** Spray guns, spray booth, drying ovens, brushes, rags/cloths, pads, sponges, tak rags, scrapers, sanding blocks, filler knives, masking tape **Materials** Stains, sealers, primers, shellac, oil, water or mixed solvents, de-greasing agents, cleaning solvents, waxes, stoppers, burnishing creams, bleach **Abrasives** Sandpapers, steel wool, sanding blocks, pads **Surfaces** Solid wood, veneered, flat panels, curved work, sub-assembly or assembly, wood composite **Surface faults** Scratches, chips, dents, cracks, blisters, blemishes **Safe working practice** Manufacturers' instructions, legal requirements (Control Of Substances Hazardous to Health COSHH, Provision and Use of Work Equipment Regulations PUWER, Health And Safety At Work Act HASAWA), Personal Protective Equipment PPE)

Learning outcome
The learner will: 2. Know the process of spray finishing furniture
Assessment criteria
The learner can: 2.1 describe **application faults** 2.2 describe how to deal with **faults** that occur 2.3 describe quality checking measures 2.4 describe the **finishing process** of furniture 2.5 identify different drying times 2.6 explain the importance of safely disposing waste

Range
Application faults Blooming, blotching, runs, streaks, orange peel, fish eye, poor wetting, uneven application, Nibs, holes **Faults** Surface, application **Finishing process** Preparation, staining, sealing, final coating

Learning outcome
The learner will: 3. Be able to spray finish furniture
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools and equipment for effective working 3.3 carry out spray finishing to **components** 3.4 demonstrate quality checking methods.

Range
Components Flat panels, curved work, sub-assembly or assembly

Unit 229 Sustainability in the timber trade

UAN:	T/503/2222
Level:	Level 2
Credit value:	3
GLH:	12
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with an understanding of environmental impacts of the timber trade and endangered timbers. The unit required learners to understand waste management techniques and cost implications.

Learning outcome
The learner will: 1. Understand how the timber trade impacts on the environment
Assessment criteria
The learner can: 1.1 explain the term sustainability 1.2 describe environmental **impacts** of the timber trade 1.3 describe man-made **causes** of deforestation 1.4 identify **endangered** timber species 1.5 describe roles of **organisations** promoting sustainable sourced timber 1.6 describe how to research **sources** of timber and timber based products 1.7 explain **reasons** to provide products made from sustainable sourced materials.

Range
Impacts Environmental degradation, carbon release & capture, deforestation, carbon footprint **Causes** Food production, population pressure, high value timbers, illegal logging **Endangered** Convention on International Trade in Endangered Species

Organisation

Forestry Stewardship Council, Programme for the Endorsement Forest Certification Scheme, pressure groups

Sources

Plantation grown, naturally grown, exotic timbers, domestically grown

Reasons

Market demand, government legislation

Learning outcome
The learner will: 2. Understand waste management within the timber trade
Assessment criteria
The learner can: 2.1 describe **waste** in processing trees to finished products 2.2 describe waste within workshops 2.3 explain ways of **minimising** waste within the manufacturing process 2.4 explain the term recycling 2.5 describe ways which **materials** can be recycled 2.6 identify cost implications of not recycling 2.7 explain how to **safely dispose** of waste

Range

Waste

Wood chippings, saw dust, off cuts, timber based products, adhesives, finishes

Minimising

Timber sizes, nesting, production process, recycling

Materials

Timber, timber based products, finishes, adhesives

Safely dispose

Burning, pelleting, brickettes, COSHH

Unit 230 Technical drawings and workshop geometry

UAN:	K/503/2220
Level:	Level 2
Credit value:	7
GLH:	40
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of the unit to provide the learner with knowledge and practical skills to both produce and read a range of protections used in technical drawings and to transfer these skills to the a workshop environment. Skills covered in this unit include developing drawing skills, drawing orthographic, oblique and isometric drawings using a range of drawing equipment. Learners will produce cutting lists from technical drawings. Learners will carry out workshop geometry. This unit will require learners to

Learning outcome
The learner will: 1. Know how to create technical drawings and practice workshop geometry
Assessment criteria
The learner can: 1.1 identify **equipment** used in technical drawings 1.2 identify **measurements** used in technical drawings 1.3 describe the use of **scales** in technical drawing 1.4 describe **projections** used in technical drawing 1.5 describe **lines** types for technical drawing 1.6 describe the purpose of rods 1.7 describe workshop geometry **techniques** 1.8 identify drawing **conventions** for abbreviations 1.9 explain how to prepare a **cutting list** using technical drawings

Range
Equipment Drawing boards, t squares, pens, pencils, compass, set squares, protractor, rubber, paper, computers, French curve, rulers, scale ruler **Measurements** Millimetres, metres **Scales** 1:1, 1:2, 1:5 **Projections** Orthographic, isometric, oblique, perspective **Lines** Construction, dimension, hidden detail, section lines, hatching, centre line **Techniques** Ellipse, drawing and bisecting shapes, enlarging, tangent, templates **Conventions** Current European guidelines **Cutting list**

Length, width & thickness and for soft furnishings, foam size, top cover

Learning outcome
The learner will: 2. Be able create technical drawings and practice workshop geometry
Assessment criteria
The learner can: 2.1 create technical drawings 2.2 use scales in technical drawings 2.3 use **projections** in technical drawings 2.4 use lines in technical drawings 2.5 set out rods 2.6 carry out workshop geometry **techniques** 2.7 use drawing **conventions** for abbreviations 2.8 prepare cutting lists from technical drawings

Range
Projections Orthographic, isometric, oblique, perspective **Techniques** Ellipse, drawing and bisecting shapes, enlarging, tangent, templates **Conventions** Current European guidelines

Unit 231 Traditional furniture upholstery

UAN:	L/503/2209
Level:	Level 2
Credit value:	22
GLH:	200
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to prepare and produce items of traditional upholstery. The skills covered by this unit include: preparing the frame, application of suspensions and filling materials to form the shape, positioning and securing upholstery covers, hand cutting skills, positioning and securing trimmings and finishings, fastening bottom cloth firmly and accurately and expands skills in relation to deep buttoning and building

Learning outcome
The learner will: 1. Understand how to prepare upholstery foundations
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe what the furnishing regulations require for traditional **support materials** 1.4 explain the importance of checking the **condition** of the frame 1.5 explain purposes of different support materials 1.6 describe **processes** used to construct suspension systems 1.7 describe different **methods** of securing traditional support materials 1.8 outline handling characteristics of support material 1.9 describe the importance of constructing foundations for deep buttoning 1.10 identify **indicators** of faults when applying support materials 1.11 identify **safe working practice** when using support materials in traditional upholstery

Range
Terms Material, quality, tolerance, dimensions, visual appearance, filling type, item type (scroll arm, squab cushions – simple/complex shape) **Support materials** Suspensions (double and single cone springs, stretch and non stretch webbing, serpentine springs, spring units), fillings (hair, fibres, felts, wadding, feather/down, polyurethane foam, latex, polyester), under cover **Condition** Joint stability, infestation, wood irregularities **Processes** Spacing, alignment, lashing, lacing, tensioning, spring edge **Methods** Stitching, tacking, stapling, stretching **Indicators** Quality, application, positioning **Safe working practice** PPE, legal requirements, Approved Code of Practice (ACOP), Health and Safety At Work Act (HASAWA), Control of Substances Hazardous to Health (COSHH), Risk Assessments

Learning outcome
The learner will: 2. Understand how to fit material and finish items of traditional upholstery
Assessment criteria
The learner can: 2.1 describe handling characteristics of **upholstery covers** 2.2 describe **functions** of different tools used in traditional upholstery 2.3 describe different **methods** of securing upholstery covers 2.4 describe **problems** that may occur during fitting upholstery covers 2.5 describe the importance of minimising waste 2.6 explain the purpose of using a bottom cloth 2.7 describe handling characteristics of **trimmings and finishings** 2.8 explain different methods of securing trimmings and finishings 2.9 describe problems that may occur during fitting of trimmings and finishings 2.10 describe **processes** for dealing with problems 2.11 describe **quality checks** for completed items

Range
Upholstery covers Patterned/striped, plain pile, vinyl, stretch fabrics, flat weave fabrics, natural hide, velvet **Functions** Hammers, staple guns, staple remover, knives, shears, scalpels, stretching device, needles, skewers **Methods** Stapling, temporary tacks, tacks, centring, 'v'-cut, 'Y'-cut, measuring, hand stitching, deep buttoning **Problems** Material defects, colour/pattern mismatching, non functional equipment, tensioning, shape and size, stitching errors, button positioning **Trimmings and finishings** Braide, piping, fringe, polished wood borders, castors, bun feet, legs, studs **Processes** Reject, replace, rectify, report, work around material defects **Quality checks** Visual, measurement

Learning outcome
The learner will: 3. Be able to produce items of traditional upholstery
Assessment criteria
The learner can: 3.1 maintain a tidy work area 3.2 organise tools, equipment and materials 3.3 check that materials meet specifications 3.4 select appropriate protection for items while working 3.5 tie in **springs** by hand 3.6 create sprung edges 3.7 build **foundations** of traditional upholstery support materials 3.8 produce **items** of traditional upholstery 3.9 carry out deep buttoning techniques

Range
Springs Double and single cone **Foundation** Hair, fibres, felt, wadding **Item** Armchair

Unit 232 Veneering methods in furniture making

UAN:	Y/503/2200
Level:	Level 2
Credit value:	3
GLH:	22
Endorsement by a sector or other appropriate body:	This unit is endorsed by ProSkills, the Sector Skills Council.
Aim:	The aim of this unit is to provide the learner with the knowledge and practical skills to be able to veneer furniture using various methods.. This unit will cover preparing, cutting and veneering methods and gives an awareness of health and safety legislation in particular when using adhesive

Learning outcome
The learner will: 1. Understand the process of preparing, tailoring and laying veneers
Assessment criteria
The learner can: 1.1 describe the purpose of technical specifications 1.2 list **terms** used in technical specifications 1.3 describe **conditions** for handling and storing veneers 1.4 describe **veneering methods** 1.5 describe functions of different **tools and equipment** used to veneer 1.6 describe the **process** for matching the quality of different veneers 1.7 describe the **characteristics** of different types of wood used to tailor veneers 1.8 describe the consequences of inaccurate measuring and cutting of joints 1.9 describe how to **prepare** surfaces for veneering 1.10 describe different uses of **adhesives** 1.11 identify **safe working practices** for adhesives 1.12 describe how to deal with **faults** that can occur during veneering 1.13 identify correct Personal Protective Equipment (PPE) for adhesives and equipment being use

Range
Terms Inlays, veneers, groundwork, straight, slip laid, leaf laid, book match, edge veneering, cross banding, sheet veneers, decorative veneers **Conditions** Flattening, damping, temperature, humidity and ventilation **Veneering methods** Hand laying, manually operated pressing, dry fitting, use of adhesives. **Tools and equipment** Veneering hammers, heated and unheated presses, heated cauls, adhesive rollers, edge clamps, veneer pins, heated adhesive pots, brushes and glue sticks, flat irons and sand bags. veneering saws and knives, planes, measuring devices, veneering tape, set squares, protractors, guillotine **Process** Grain fineness, orientation, colour, hue, decoration, light refraction characteristics **Characteristics** Hardwood, softwood **Prepare** Manmade board, solid wood, porous, **Adhesives** Polyvinyl acetate, urea or phenol formaldehyde, animal based glues, and resorcinol, contact **Safe working practice** Manufacturers' instructions and COSHH regulations, waste disposal, data sheets **Faults** Misalignment, mismatching, discolouration, marking or blistering, glue penetration, jointing, flaws

Learning outcome
The learner will: 2. Be able to prepare and tailor veneers
Assessment criteria
The learner can: 2.1 maintain a tidy work area 2.2 organise tools, equipment and materials 2.3 measure and mark veneers 2.4 cut veneers 2.5 tailor veneer **joints**.

Range
Joints Taping, stitching

Learning outcome
The learner will: 3. Be able to lay veneers onto groundwork
Assessment criteria
The learner can: 3.1 prepare groundwork for **veneering methods** 3.2 carry out veneering methods 3.3 demonstrate how to deal with veneer faults 3.4 select Personal Protective Equipment.

Range
Veneering methods Hand laying, manually operated pressing, dry fitting, use of adhesives

Appendix 1 Relationships to other qualifications

Literacy, language, numeracy and ICT skills development

These qualifications can develop skills that can be used in the following qualifications:

- Functional Skills (England) – see **www.cityandguilds.com/functionalskills**
- Essential Skills (Northern Ireland) – see **www.cityandguilds.com/essentialskillsni**
- Essential Skills Wales – see **www.cityandguilds.com/esw**.

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 **Centres and Training Providers homepage** on **www.cityandguilds.com**.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Our Quality Assurance Requirements encompasses all of the relevant requirements of key regulatory documents such as:

- SQA Awarding Body Criteria (2007)
- NVQ Code of Practice (2006)

and sets out the criteria that centres should adhere to pre and post centre and qualification approval.

Access to Assessment & Qualifications 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 homepage** section of the City & Guilds website also contains useful information such on such things as:

- **Walled Garden:** how to register and certificate candidates on line
- **Events**: dates and information on the latest Centre events
- **Online assessment**: how to register for e-assessments.

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www.cityandguilds.com

Useful contacts

UK learners General qualification information	T: +44 (0)844 543 0033 E: **learnersupport@cityandguilds.com**
International learners General qualification information	T: +44 (0)844 543 0033 F: +44 (0)20 7294 2413 E: **intcg@cityandguilds.com**
Centres Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **centresupport@cityandguilds.com**
Single subject qualifications Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 F: +44 (0)20 7294 2404 (BB forms) E: **singlesubjects@cityandguilds.com**
International awards Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **intops@cityandguilds.com**
Walled Garden Re-issue of password or username, Technical problems, Entries, Results, e-assessments, Navigation, User/menu option, Problems	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **walledgarden@cityandguilds.com**
Employer Employer solutions, Mapping, Accreditation, Development Skills, Consultancy	T: +44 (0)121 503 8993 E: **business@cityandguilds.com**
Publications Logbooks, Centre documents, Forms, Free literature	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413

About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Land Based Services (land-based qualifications), the Centre for Skills Development (CSD works to improve the policy and practice of vocational education and training worldwide) and Learning Assistant (an online e-portfolio).

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