

Furniture Manufacturer Apprenticeship Standard

General Furniture Manufacturer Modules of Assessment

Contents

Introduction.....	3
Assessment.....	4
Portfolio of Evidence – Guidance.....	4
Certification	5
Appeals	5
Module 1 – Machinery, Tools and Equipment.....	6
Module 2 – Measure and Mark Out.....	8
Module 3 – Components	10
Module 4 – Cutting	12
Module 5 – Sanding	14
Module 6 - Joints	16
Module 7 – Veneers and Laminates.....	18
Module 8 - Cramping	20
Module 9 - Fittings.....	22
Module 10 – Gluing.....	24
Module 11 – Jigs and Templates.....	26
Module 12 - Assembly	28
Module 13 - Edge Banding.....	30
Module 14 – Finishing Applications	32
Module 15 – Electrical/Mechanical Fittings	34
Module 16 – Rectification/Rework	36
Module 17 – Safe Handling and Storage.....	38

Introduction

It is recognised that a Furniture Maker is likely to work in a variety of different roles and this standard allows for the apprentice to demonstrate a full range of skills across a variety of job roles within the occupation. This document covers the requirements for General Furniture Manufacturer.

All apprentices must complete the core requirements (see Assessment Modules – Core Requirements).

The employer, apprentice and training provider should undertake a programme that will meet the Standard Criteria to ensure all areas of the outcomes are covered in the apprentice job role.

Training providers should be evaluated and approved by the Assessment Organisation using appropriate methods.

Requirements

Furniture Manufacturers are skilled craftsmen/women who make pieces of furniture. They may work in a small, independent shop that produces custom furniture or in a factory that mass-produces pieces of furniture. They will manufacture furniture such as:

- Domestic – kitchens, bedrooms, living room and other items for the home
- Office - desk, seating, tables and other items for the office environment
- Contract - furniture for public areas such as hospitals, schools, hotels and airports
- Manufacture of high quality wooden components

In order to ensure sufficient flexibility to meet the needs of the industry whilst maintaining the rigour of every single apprenticeship within it, Furniture Manufacturers will need to undertake six of the following requirements, at least three must be Group A.

YOU WILL KNOW HOW TO AND BE ABLE TO

Group A	Machinery, Tools and Equipment	Set up and operate machinery, tools and equipment used to produce furniture. Understand tools and equipment used
	Components	Make components of furniture to specification within acceptable tolerances. Understand how and where components are used
	Cutting	Use appropriate equipment to cut materials within acceptable tolerances
	Joints	Understand the principles of joints used in making hand-crafted furniture
	Veneers and Laminates	Select, prepare and apply veneers to items of furniture
	Assembly	Assemble components of furniture. Understand the sequence of assembly and why this is important
	Finishing	Apply stains, sealers, basecoats and finishes to production furniture

Group B	Measure and Mark Out	Measure and mark out materials to specification
	Sanding	Sand materials for preparation prior to assembly, post-assembly and de-nibbing. Understand grit sizes and the process of sanding
	Cramping	Position components and apply cramps to ensure products are positioned securely to specification
	Fittings	Prepare and assemble components to specification, finishing and checking the assembly conforms to specifications
	Gluing	Apply adhesives to components. Understand types, methods and processes involved in gluing
	Jigs and Templates	Use and maintain jigs and templates for furniture production. <i>Jigs are used to ensure repeatability and accuracy in the production of furniture. These can be hand held or mounted on workbenches.</i>
	Edge Banding	Carry out edge-banding process following standard operating procedures. <i>Edge banding is the process of applying a trim or edge to the piece of furniture to make it neat and aesthetically pleasing.</i>
	Electrical/ Mechanical Fittings	Fit mechanical or electrical components to furniture
	Rectification/ Rework	Carry out rectification or rework. This includes assessing and repairing items
	Safe Handling and Storage	Pack and store products and components following standard operating procedures. Understand and follow procedures for safe handling of products

Assessment

On Programme

The suggested training and assessment for the apprenticeship is based on the 'Furniture Manufacturer Assessment Modules,' which detail the training modules that should be completed for the core requirements and each occupational area.

On-going reviews will be completed by the provider and employer during the apprenticeship but will not contribute to the end point assessment.

End Point Assessment

The independent assessment organisation is responsible for carrying out the end point assessment. When the apprentice, employer and provider have determined that the apprentice is ready to complete the apprenticeship they will hold a final review to go through the portfolio of work. The apprentice will need to have completed the Level 1 Functional Skills in English and Maths and taken the test for the Level 2. This will act as a gateway to the end point assessment.

Portfolio of Evidence – Guidance

Evidence should show that the apprentice can complete all of the learning outcomes for each core module and options taken.

Types of Evidence:

Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Quantity of Evidence:

Evidence should show that the apprentice can meet the requirements of the modules in a way that demonstrates that the standards can be achieved consistently over an appropriate period of time.

Potential Sources and Types of Evidence:

The main source of evidence for each module will be observation of the learner's performance and knowledge demonstrated during the completion of the module. There must also be evidence of using questioning and examination of work products. The following can be used as supplementary physical or documentary evidence:

- Responses to oral or written questioning
- Professional discussion
- Personal statements/reflective accounts
- Assessment records
- Case studies
- Evidence of feedback given
- Products of learner's work
- Expert witness testimony
- Evidence of recognition of prior learning
- Assessment plans

Please Note that photocopied or downloaded documents are not normally acceptable evidence unless accompanied by a record of a professional discussion or assessor statement confirming learner knowledge of the subject.

Certification

Certification is claimed at the end of the apprenticeship when all components are complete.

Appeals

In the event of an appeal against the grade awarded, the Assessment Organisation will carry out an independent review of the evidence to confirm or modify the grade.

Module 1 – Machinery, Tools and Equipment

What is required

Set up and operate machinery, tools and equipment used to produce furniture. Understand tools and equipment used.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly, calibrated and in good working order following standard operating procedures and any manufacturer's instructions
5. ensure guarding of machines is in place before using and explain why this is important
6. operate and monitor machinery, tools and equipment and quality of finished products following company procedures, manufacturers' instructions and codes of practice
7. describe relevant health and safety responsibilities
8. describe the meaning of terms used in specifications
9. describe how to check equipment is set up and is in good working order
10. explain their responsibilities in relation to operating machinery
11. give a brief explanation of machinery, tools and equipment used
12. describe how to prepare and set up machinery, tools and equipment following manufacturers' instructions and company procedures
13. describe how to operate and monitor machinery, tools and equipment and quality of the finished product following standard operating procedures and manufacturers' instructions
14. describe the standard operating procedures and manufacturers' instructions and codes of practice for the machinery, tools and equipment used
15. describe the limits of the machinery used
16. list the personal protective equipment you must wear and why

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets

Machinery, Tools and Equipment	Wood working machinery CNC Machinery Hand tools Electric and air powered tools Hand crafting tools Measuring devices
Guarding	HSE Safe Working Practices HSE Woodworking Information Sheets Brakes

Assessment:

Observed Assessment

Module 2 – Measure and Mark Out

What is required

Measure and mark out materials to specification.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. check and calibrate marking, measuring tools and ancillary equipment following standard operating procedures
7. use marking and measuring tools and ancillary equipment following standard operating procedures and manufacturers' instructions
8. mark out from setting out details and cutting lists following standard operating procedures
9. describe relevant health and safety responsibilities
10. describe the meaning of terms used in specifications
11. describe how to check equipment is set up and is in good working order
12. describe how to check materials and the common faults that can occur
13. describe how to read cutting lists
14. describe how to mark out components from cutting lists
15. describe calibration and why this is important
16. describe how to use marking, measuring tools and ancillary equipment

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Hand tools Measuring devices Markers Staff

	Tri-squares Marking gauges Lasers
Materials	Timber Fabrics Metal Glass Manmade composites Foam Manufactured board
Calibrate	Measuring devices (tools and equipment) Tolerances
Faults	Material Jigs and templates Equipment

Assessment:

Observed Assessment.

Module 3 – Components

What is required

Make components of furniture to specification within acceptable tolerances. Understand how and where components are used.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. cut and shape components within acceptable tolerance following standard operating procedures
7. mark components for identification following standard operating procedures
8. describe relevant health and safety responsibilities
9. describe the meaning of terms used in specifications
10. describe how to check equipment is set up and is in good working order
11. describe how to check materials and the common faults that can occur
12. explain steps required to make components to company standards
13. describe the manufacturing process in your organisation and where you fit into it
14. explain how components are marked and why
15. state the tolerances allowed
16. describe when and where components you make are going to be used

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Wood working machinery CNC Machinery Hand tools Electric and air powered tools Hand crafting tools

	Measuring devices
Materials	Timber Fabrics Metal Glass Manmade composites Foam Manufactured board
Faults	Machinery, tools and equipment Materials

Assessment:

Observed Assessment.

Module 4 – Cutting

What is required

Use appropriate equipment to cut materials within acceptable tolerances

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. prepare work area, tools and equipment for cutting following standard operating procedures
7. support materials before cutting following standard operating procedures and manufacturers' instructions
8. select appropriate cutting tools following standard operating procedures and manufacturers' instructions
9. cut materials to size and shape within tolerances following standard operating procedures and manufacturers' instructions following the cutting list
10. handle materials and components avoiding damage following standard operating procedures
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. state tolerances allowed
16. describe how to minimise the risk of incorrect cuts occurring
17. describe why it is important to number parts for cross referencing
18. describe the importance of an accurate cutting list
19. describe the importance of using straight-edged templates
20. describe why it is important to support material before cutting
21. describe why it is important to select appropriate cutting tools according to the manufacturers' instructions
22. describe why it is important that the cut is straight and smooth

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
-------------------	--

Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Wood working machinery CNC Machinery Hand tools Electric and air powered tools Hand crafting tools Measuring devices Jigs Templates Cutting tools (Saws, Planers, Routers, Drills)
Materials	Timber Fabrics Metal Glass Manmade composites Foam Manufactured board
Tolerances	+/- 0.5mm (wood) +/- 2mm (glass)
Faults	Knots Shape Size Dimensions Glues Marking and blisters Defects eg: Scratches, marks, density, holes, weave

Assessment:

Observed Assessment.

Module 5 – Sanding

What is required

Sand materials for preparation prior to assembly, post-assembly and de-nibbing.
Understand grit sizes and the process of sanding.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. sand wooden components using appropriate grade sizes and blocks following standard operating procedures
7. clean wooden components between sanding following standard operating procedures
8. scrape tight corners following standard operating procedures
9. raise fibres of the grain following standard operating procedures
10. describe relevant health and safety responsibilities
11. describe the meaning of terms used in specifications
12. describe how to check equipment is set up and is in good working order
13. describe how to check materials and the common faults that can occur
14. describe when machine and hand sanding is appropriate
15. describe how to recognise different grades of abrasives and their uses
16. state the order different abrasives grades need to be used
17. describe faults/defects that can occur and how to recognise and how these can be rectified during the production process
18. explain why it is important to sand with the grain
19. describe how to prevent the appearance of a raised grain
20. describe how to sand different components
21. describe what de-nibbing is and how this is done
22. describe the different pads available and their uses
23. describe fillers used within the preparation process
24. describe different machinery and equipment to use and why

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
-------------------	--

	COSHH
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Materials	Timber Fabrics Metal Glass Manmade composites Foam Manufactured board
Faults	Grade Materials

Assessment:

Observed Assessment.

Module 6 - Joints

What is required

Joint components and understand the principles of joints used in making hand-crafted furniture.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. identify joints required and type of joint to be made following standard operating procedures
7. mark out components following standard operating procedures
8. set machinery, jigs and equipment following standard operating procedures and manufacturers' instructions
9. cut joints to within required tolerances following standard operating procedures
10. check joints fit to specification following standard operating procedures
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. describe different types of joints and their uses
16. describe how to mark out components and acceptable tolerances
17. describe how to set up machinery, jigs and templates
18. describe how to cut joints and tolerances allowed
19. describe how to check joints fit for accuracy and why this is important

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and	Wood working machinery

Equipment	CNC Machinery Hand tools Electric and air powered tools Hand crafting tools Measuring devices
Materials	Timber Fabrics Metal Glass Manmade composites Foam Manufactured board
Faults	Materials Fit Cut
Joints	Scarf, rub joints, knock-down, dove-tail, mitred dove-tail, mortise and tenon, mitred tenon, bridle, lap, mitre, tongue and groove, loose tongue, housing, dowel, biscuit and butt joints

Assessment:

Observed Assessment.

Module 7 – Veneers and Laminates

What is required

Select, prepare and apply veneers to items of furniture.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. check grain structure, shade and direction following standard operating procedures
7. measure, mark out and cut veneers within the specified tolerances following standard operating procedures
8. minimise waste in cutting following standard operating procedures
9. handle veneers in ways that avoid damage following standard operating procedures
10. transfer surplus veneers to designated storage locations following standard operating procedures
11. joint veneers ensuring edges are correctly aligned and jointed to required tolerances, without distortion of veneers following standard operating procedures
12. prepare surfaces to receive veneers, making sure they are free of irregularities, defects, dust and debris following standard operating procedures
13. prepare and apply adhesives following manufacturers' instructions and standard operating procedures
14. press veneers to meet specifications following standard operating procedures
15. trim, cut and finish veneered panels to specification following standard operating procedures
16. pass onto next process following standard operating procedures
17. describe relevant health and safety responsibilities
18. describe the meaning of terms used in specifications
19. describe how to check equipment is set up and is in good working order
20. describe how to check materials and the common faults that can occur
21. describe the handling characteristics of veneers and how to protect them from damage during cutting and storage
22. describe the consequences of inaccurate measuring and cutting
23. describe the handling characteristics and effects of pressing different types of veneers

Range/Scope:

Health and Safety	PPE
-------------------	-----

	Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Wood working machinery CNC Machinery Hand tools Electric and air powered tools Hand crafting tools Measuring devices
Materials	Timber Fabrics Metal Glass Manmade composites Foam Manufactured board
Faults	Machinery, Tools and equipment Materials
Quality Assurance	Colour Grain Grade Quality Shade

Assessment:

Observed Assessment.

Module 8 - Cramping

What is required

Position components and apply cramps to ensure products are positioned securely to specification.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. position materials to specification following standard operating procedures
7. apply adhesives to specification following standard operating procedures
8. assemble components to specification following standard operating procedures
9. apply cramps to specification following standard operating procedures
10. check piece is square and true to specification following standard operating procedures
11. rectify any faults to specification following standard operating procedures
12. remove excess adhesives following standard operating procedures
13. allow piece to dry to specification following standard operating procedures
14. pass on/store piece following standard operating procedures
15. describe relevant health and safety responsibilities
16. describe the meaning of terms used in specifications
17. describe how to check equipment is set up and is in good working order
18. describe how to check materials and the common faults that can occur
19. adhesive drying times

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Materials	Appropriate Adhesives Timber

	Metal Glass Manmade composites Manufactured board
Faults	Materials Cramps Positon
Cramps	G-cramps/G-clamps Sash cramps Presses Quick cramps

Assessment:

Observed Assessment.

Module 9 - Fittings

What is required

Prepare and assemble components to specification, finishing and checking the assembly conforms to specifications.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. ensure surfaces are in a suitable condition following standard operating procedures
7. position fittings for correctness of fit within the required tolerances following standard operating procedures
8. attach fittings using required methods following standard operating procedures
9. check fittings are plumb, level and free from binding, within allowed tolerances to specification following standard operating procedures
10. pass on to following stage
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. describe the different types of fittings used and their purpose
16. describe the quality checks to be made before fittings are used and the consequences of not doing these
17. describe the consequences of incorrect positioning of fittings
18. describe the consequences of not securing fittings correctly
19. describe when and why different methods for attaching fittings are used
20. describe the functions and uses of the different types of equipment used in assembly

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets

	Batch info Work tickets
Machinery, Tools and Equipment	Power tools Hand tools Jigs and templates CNC Machinery Boring Machinery Clamps and presses Measuring equipment
Materials	Fixtures Fittings
Faults	Machinery, tools and equipment Fixtures Fitting

Assessment:

Observed Assessment.

Module 10 – Gluing

What is required

Apply adhesives to components. Understand types, methods and processes involved in gluing.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. prepare surfaces to specification following standard operating procedures
7. apply adhesives to specification following standard operating procedures
8. remove excess adhesives to specification following standard operating procedures
9. cure components to specification following standard operating procedures
10. progress to next stage following standard operating procedures
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. different adhesives used
16. curing times of different adhesives used

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Glue guns Brushes Glue rollers Glue machinery
Materials	Adhesives
Faults	Machinery, tools and equipment

	Materials Shelf life of adhesives
--	--------------------------------------

Assessment:

Observed Assessment.

Module 11 – Jigs and Templates

What is required

Use and maintain jigs and templates for furniture production. Jigs are used to ensure repeatability and accuracy in the production of furniture. These can be hand held or mounted on workbenches.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is calibrated, set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. use jigs and templates to specification following standard operating procedures
7. handle jigs and templates in ways that protect them from damage following standard operating procedures
8. store completed jigs and templates under suitable conditions to keep them in good order following standard operating procedures
9. routinely examine jigs and templates for signs of damage following standard operating procedures
10. identify damage that affects use of jigs or templates following standard operating procedures
11. clean jigs and templates using suitable methods and equipment following standard operating procedures
12. remove and report jigs and templates which are damaged beyond use following standard operating procedures
13. describe relevant health and safety responsibilities
14. describe the meaning of terms used in specifications
15. describe how to check equipment is set up and is in good working order
16. describe how to check materials and the common faults that can occur
17. describe how to protect jigs and templates from damage
18. explain why it is important to examine jigs and templates on a routine basis
19. describe damage that can occur to jigs and templates used
20. describe tolerance levels when assessing if jigs or templates are beyond use

Range:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
-------------------	--

Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Hand tools Power tools Measuring equipment Cleaning products
Materials	Jigs Templates
Faults	Size Shape Wear and tear

Assessment:

Observed Assessment.

Module 12 - Assembly

What is required

Assemble components of furniture. Understand the sequence of assembly and why this is important.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. prepare to assemble, mark components to specification following standard operating procedures
7. assemble routine components in position following standard operating procedures
8. secure components to specification following standard operating procedures
9. finish assembly to specification following standard operating procedures
10. check finished assembly meets specification following standard operating procedures
11. proceed to next stage
12. describe relevant health and safety responsibilities
13. describe the meaning of terms used in specifications
14. describe how to check equipment is set up and is in good working order
15. describe how to check materials and the common faults that can occur
16. describe assembly methods and techniques
17. describe quality control procedures and recognition of assembly defects
18. describe handling equipment and procedures
19. describe preparation methods and techniques
20. describe tool and equipment care and control procedures

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets

Machinery, Tools and Equipment	Power tools Hand tools Measuring equipment Cramps Jigs and templates
Materials	Fixings Adhesives Components
Faults	Machinery, tools and equipment Materials
Marking	Face sides Sequence
Secure components	Gluing Fixing Cramping

Assessment:

Observed Assessment.

Module 13 - Edge Banding

What is required

Carry out edge-banding process following standard operating procedures. Edge banding is the process of applying a trim or edge to the piece of furniture to make it neat and aesthetically pleasing.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults
6. prepare adhesives and components for application following standard operating procedures
7. position edge finishes to specification following standard operating procedures
8. apply edge finishes to products to specification following standard operating procedures
9. trim edge finishes to specification following standard operating procedures
10. check and finish components to specification following standard operating procedures
11. process to next stage
12. describe relevant health and safety responsibilities
13. describe the meaning of terms used in specifications
14. describe how to check equipment is set up and is in good working order
15. describe how to check materials and the common faults that can occur
16. describe adhesives and how to prepare these
17. describe curing times and process
18. describe different edge finishes available, their uses and how to apply these
19. describe the trimming process
20. describe the quality checks that need to be carried out and why

Range:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info

	Work tickets
Machinery, Tools and Equipment	Edge banders Measuring Cutting equipment Cramps Jigs
Materials	Adhesives Edge Materials
Faults	Machinery, tools and equipment Materials Components
Edgebanders	Single and/or double sided Iron CNC Laser
Edge Treatment Finishes	Solid lippings Profiled foil Laminates Veneers Edging tape

Assessment:

Observed Assessment.

Module 14 – Finishing Applications

What is required

Apply stains, sealers, primers, oils, polishes, varnishes, waxes, lacquers and finishing coats to furniture. Finish furniture by spraying.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. use effective techniques and appropriate tools for the kind of materials and type of surface following standard operating procedures
7. check spray guns are free from contamination before charging with materials following standard operating procedures
8. apply spray from a suitable distance from workpieces following standard operating procedures
9. adjust spraying techniques as necessary to achieve required finishes following standard operating procedures
10. apply finishes uniformly to required build and depth of colour following standard operating procedures
11. allow sufficient drying times between multiple coats following standard operating procedures
12. clear surfaces of excess materials at each stage of the process following standard operating procedures
13. check finished products meet to specification and correct any faults following standard operating procedures
14. process completed work to next stage following standard operating procedures
15. store any unused materials following standard operating procedures
16. dispose of any waste materials following standard operating procedures
17. describe relevant health and safety responsibilities
18. describe the meaning of terms used in specifications and requirements list
19. describe how to check equipment is set up and is in good working order
20. describe how to check materials and the common faults that can occur
21. describe common faults that can occur and the process for correcting them
22. describe how to check spray guns are free from contamination
23. describe how to apply spray from a suitable distance from workpieces
24. describe how to adjust spraying techniques to achieve required finishes
25. describe how to apply finishes uniformly to the required build and depth of colour
26. describe effective techniques and appropriate tools for the kind of materials and type of surface
27. describe specified drying times
28. describe how to dispose of any waste materials and why this is important

Range:

Health & Safety	PPE Safe System of Work Risk Assessment Training documents / evidence Material Data Sheets
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Finishing equipment, including spray guns Hand finishing equipment Automated finishing lines Ovens Booths
Materials	Stains Sealers Lacquers/UV Primers Solvents and water based materials Paints Waxes Oils Grain fillers Patinas Varnish Polish
Faults	Equipment faults External factors Application faults (eg: blooming, moisture, temperature, blotching, runs, streaks, curing, and silicones – orange peel, fish eye) Viscosity Scratches Knots Dents Stains Blemishes Excess adhesives

Assessment:

Observed Assessment.

Module 15 – Electrical/Mechanical Fittings

What is required

First fit mechanical or electrical components to furniture. You will be required to fit a range of mechanical, electrical and electronic components.

Electrical installations can be divided into first, second and third fixes:

- First Fix: Positioning and securing of accessory boxes
- Second Fix: Preparation and positioning of cables
- Third Fix: Termination of conductors to accessories and protective devices

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. follow instructions, assembly drawings and any other specifications following standard operating procedures
7. ensure specified components are available and they are in a usable condition following standard operating procedures
8. assemble components in position following manufacturers' instructions and standard operating procedures
9. secure components following manufacturers instructions and standard operating procedures
10. check completed assembly to ensure all operations have been completed and finished assembly meets specification following standard operating procedures
11. process to following stage
12. describe relevant health and safety responsibilities
13. describe the meaning of terms used in specifications
14. describe how to check equipment is set up and is in good working order
15. describe how to check materials and the common faults that can occur
16. describe purpose and function of components including identification systems including colour codes and manufacturer's specification
17. describe preparations that need to be undertaken on components prior to fitting
18. describe assembly and securing methods and procedures used, and importance of adhering to them
19. describe quality control procedures to be followed during the fitting and assembly operation

20. describe how to conduct any necessary checks to ensure the accuracy, position, security, function, completeness and electrical continuity of the assembly
21. describe extent of first fitting of electrical components

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Power tools hand tools
Materials	Components
Faults	Machinery, tools and equipment Materials Fit

Assessment:

Observed Assessment.

Module 16 – Rectification/Rework

What is required

Carry out rectification or rework. This includes assessing and repairing items.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. identify work that needs to be carried out following standard operating procedures
7. gain agreement from relevant person(s) for work to be carried out
8. carry out rectification/rework following standard operating procedures
9. check completed work meets specification following standard operating procedures
10. pass on
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Power tools Hand tools Jigs and templates CNC Machinery Machinery Clamps and presses Measuring equipment
Materials	Appropriate Adhesives Timber

	Metal Glass Manmade composites Manufactured board
Faults	Machinery, tools and equipment Materials

Assessment:

Observed Assessment.

Module 17 – Safe Handling and Storage

What is required

Pack and store products and components following standard operating procedures.
Understand and follow procedures for safe handling of products.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. handle products and materials in ways that prevents damage following standard operating procedures
7. pack products and materials to specification
8. store and mark products and materials to specification following standard operating procedures
9. store products and materials to ensure they are accessible to others to specification following standard operating procedures
10. use suitable handling equipment following standard operating procedures
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. describe methods for storing different types of products and materials
16. describe who requires access to the products and materials
17. describe what consumables are stored, and where
18. describe equipment used when storing products and materials

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and	Handling equipment

Equipment	Marking equipment Packing equipment Weighing equipment Measuring equipment
Materials	Packaging Labelling/identification
Faults	Machinery, tools and equipment Materials

Assessment:

Observed Assessment.