

Unit 111: Fabric Manipulation

Unit code:	L/502/5440
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

The aim of the unit is to introduce learners to a range of fabric manipulation techniques. Learners will have the opportunity to recognise and explore the potential of a range of fabrics and materials which can be manipulated using a variety of techniques and processes to produce innovative designs and work which can be applied to a fine art, creative textile or fashion scenario.

● Unit introduction

Textile artists and designers use a wide range of media, materials, techniques and processes within their work. Textile designers and artists are continually striving to produce innovative designs and practical work. These designs can be used in functional applications, such as fashion, accessories, fabrics for the home and interiors. They can also be used in scenarios where the textiles work does not have a design-led function, such as freestanding structures, hangings and soft sculptures. In the field of textile design, practitioners explore and experiment with different ways of manipulating fabric. This gives them with information on the characteristics of fabrics, both synthetic and natural. This knowledge can then feed into the design process, as practitioners develop their ideas by considering what they have discovered. Interesting combinations of fabrics and techniques can provide an innovative basis of artist's, craftspeople or the designers output and working practices.

In this unit learners will work through a series of tasks that will provide them with knowledge about fabric manipulation. Through practical exploration they will learn how to recognise the characteristics of fabrics and yarns. They will also be introduced to a range of fabric manipulation techniques and processes.

Learners will evaluate their work through analysis and review and this will feed back into the design process. Learners will refine their ideas and select processes for further development to a given scenario or brief.

● Learning outcomes

On completion of this unit a learner should:

- 1 Be able to explore the properties and characteristics of fabrics
- 2 Be able to produce a body of samples using manipulation techniques and processes
- 3 Be able to evaluate work.

Unit content

1 Be able to explore the properties and characteristics of fabrics

Explore natural and synthetic fabrics and yarns: eg mesh, net, lace; papers, eg handmade, commercially made, different weights, different textures; synthetic fabrics, eg acrylic, viscose, PVC, Lycra™, Gore-tex™, satins, polyester; natural fabrics, eg cotton, wool, silk, suede, linen; fabricated materials, eg felt, rubber, plastic; woven structures, eg close, even, loosely knitted, plain, combined stitch, jacquard

Properties and characteristics: appearance, eg opaque, transparent, weight, texture, shiny, matt; consider performance, eg strength, flammability, elasticity, durability, pilling

2 Be able to produce a body of samples using manipulation techniques and processes

Techniques and processes: eg pleating, smocking, gathering, piping, cutwork and quilting; fraying, cutting, moulding, burning; constructing, assembling, joining; shaping, bonding, distressing; piercing, layering, displacing, removing threads

Materials: traditional materials, eg natural and synthetic fabrics, aquafilmm, bondaweb; non-traditional materials, eg plastics, paper, wire form, fake fur, found and recycled materials

Safe practice: health and safety: Health and Safety Act 1974, elimination of risk to self and others; thinking and working safely within a studio environment, following COSHH guidance on materials and workshop practice

Develop: generate, broaden, advance, refine embroidered samples using appropriate techniques and processes

Scenarios: context, eg fine art textiles, fashion, interiors, commercial; functional, eg labels; non-functional, eg accessories; use, eg 2D, 3D, site specific; recording, eg drawings, records, notebooks, visualisations; appropriate references to professional practice

3 Be able to evaluate work

Analyse: consider successes and/or development areas of working practices; use of media; techniques used; quality and aesthetics of work

Review and refine ideas: eg consider ideas, subjects, influences, consider fitness for purpose, clarify intentions and working practices, consider test results, own views and feedback from others

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 use and recognise the properties and characteristics of fabrics when producing fabric manipulation samples [IE, CT, SM]	M1 consistently produce development work, tests and samples that show understanding and purpose in adapting ideas	D1 independently manipulate a comprehensive range of fabrics to produce a creative and imaginative set of samples
P2 use techniques and processes when producing a body of samples [IE, CT, SM]	M2 effectively analyse, review and refine a diverse range of ideas and well-considered processes at relevant stages	D2 perceptively analyse, review and refine a comprehensive range of ideas and sophisticated processes at relevant stages
P3 evaluate samples throughout the stages of development. [RL, SM]	M3 effectively produce a coherent range of effective outcomes to a given brief or scenario.	D3 independently produce a sophisticated response and exciting range of innovative outcomes to a given brief or scenario.

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Learning outcomes 1 and 2 can be delivered through a series of tutor-led demonstrations, with learners then producing practical work. Tutors need to provide learners with examples of work that explores the properties and characteristics of a variety of yarns and fabrics and need to demonstrate some of the techniques and processes used to produce this work. In this way learners will gain the understanding and knowledge to enable them to produce work independently. Practical evidence should include sketchbook or journal work; a range of paper work and designs that demonstrate research and the exploration of ideas, and fabric manipulation samples that show experimentation with a wide range of media, materials, manipulation techniques and processes. Learners need to investigate synthetic and natural yarns and use the associated processes and equipment. Tutor demonstrations should include health and safety information and guidelines.

For learning outcome 2, learners need to develop design and manipulation techniques to a given scenario or brief. This can be in a functional or non-functional form for fashion garments or accessories, interiors or fine art textiles. Tutors should consider integrating the delivery of this unit with any other relevant units learners are studying as part of the programme.

For learning outcome 3, learners should record their findings and the results of ongoing evaluations from the beginning of the unit, to act as source material for later work.

Learning outcome 3 should be delivered alongside learning outcomes 1 and 2. As learners work through the various materials and processes they will have the opportunity to consider a range of results and generate ideas based on these. Tutors should support interesting and innovative attempts at combining different processes, provided that health and safety guidelines and conditions are not compromised. Part of this outcome links with learning outcome 3, in that learners need to be involved in an ongoing evaluation of the techniques shown by the tutor, the examples of work they have seen, and the results of their explorations. From this process they should develop ideas further and refine the range of their working practices.

Evidence for learning outcome 3 should be gained through learners' involvement in ongoing evaluation. Their thoughts, responses and conclusions should be clearly written up in their sketchbook or work journal, alongside technical information, and the results of test findings. Learners need to be taught how to structure their ongoing reviews, as this is an important part of the unit as a whole, and not just the focus of this outcome. Learners should be encouraged to record both their creative intentions and purely technical information. Analysis, review and the refinement of ideas can be delivered through a blend of short mid-point group critiques and one-to-one tutorials.

Learners must be aware of all health and safety issues relating to the materials, techniques and processes to be used. Learners need to be advised of, and adhere to, all aspects of current legislation associated with health and safety in the workplace. They must be aware of how they can minimise risk to themselves and others by working safely at all times.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction to unit and assignments.
Assignment 1: A Small Panel Based on 'The Fairground' Stage 1: Properties and characteristics of fabric and yarns Lecture and discussion. Research by learners on properties and characteristics of fabric and yarns. Demonstration by tutor. Practical exercises and experimentation by learners. Analysis and review of samples and test pieces by learners. Presentation.
Stage 2: Fabric manipulation techniques and processes Lecture and discussion. Demonstration by tutor. Design ideas. Practical exercises and experimentation by tutor. Analyse and review of samples and test pieces by learners. Presentation.
Learner-initiated study
Assignment 2: 2D/3D Piece Inspired by 'Nature' Learners: <ul style="list-style-type: none">• research and generate design ideas to given constraints and requirements• develop design ideas• produce samples• evaluate and refine ideas• produce final outcome• present of work• take part in group critique.
Learner-initiated study.
Review of unit and assessment.

Assessment

When applying the grading criteria tutors should follow the advice given below. Please note that the examples of evidence given here are indicative only. The advice is not inclusive and the examples need not be included in a learner's work in order for the learner to achieve the exemplified grade.

For P1, learners should explore a variety of materials and fabrics through experimentation and demonstrate through the samples and, or in written form that they can recognise the properties and characteristics of fabrics and materials. This may include gathering information on the work of other artists and designers.

To achieve P2, learners should use the fabrics and materials worked in P1 to develop a portfolio of fabric manipulation samples using a variety of techniques and processes. These could be developed from design ideas. They must communicate their intentions clearly and explain how their ideas will be developed. Learners will be expected to develop fabric manipulation samples into a functional and/or non-functional form from ideas, to a given brief or scenario. They must show some skill, but the range of outcomes produced may be limited. There may be evidence of ideas and/or processes being abandoned without any in-depth enquiry.

To achieve P3, learners must demonstrate a basic ability to analyse, review and refine an appropriate range of ideas and suitable processes at relevant stages in their design and development process. They must explain how the review has changed the direction of their ideas about processes and subjects.

Learners must evaluate the suitability of selected media, materials, techniques and processes. Annotations in notebooks and evaluations of the development of samples that refine ideas should be in evidence. Language used must demonstrate a basic understanding of analysis.

For M1, should ensure that learners must research a considered range of fabrics. There should be evidence that learners have purposefully and effectively sourced and used fabrics and materials in producing a range of tests and samples. Learners should investigate design ideas and associated visual language in a diverse and purposeful manner. This work must demonstrate consistency and the ability to adapt skills and knowledge. It should be presented in a portfolio in the form of worksheets or a sketchbook.

For M2, learners must effectively analyse, review and refine a diverse range of ideas and well-considered processes, in a well focused, coherent manner and at pertinent times. Ideas and choices of processes must be adapted accordingly with a degree of skill and consistency.

For M3, learners must produce a coherent range of effective outcomes to a given brief or scenario that show skill and considered use of materials and processes. Outcomes must be clearly and effectively influenced by the results of analysis and review. There should be a consistency in the approach to the work generally.

Evidence for D1 must demonstrate that the learner has worked independently to manipulate a comprehensive range of fabrics and materials to produce a creative and imaginative set of samples.

For D2, learners must demonstrate that they have perceptively analysed, reviewed and refined samples at relevant stages of the work. Work produced must show an ability to use sophisticated processes at relevant stages in development and in final outcomes.

For D3, learners must demonstrate a sophisticated response to a given brief or scenario. The work should be creative and innovative and show an informed and perceptive approach.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the *Grading grid*. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
PI, P2, P3 M1, M2, M3 D1, D2, D3	Assignment 1: A Small Panel Based on 'The Fairground'	Fine art printmaker gathers visual materials, develops experimental samples, reviews the samples and then makes a final piece.	Tutor, self and peer assessment.
PI, P2, P3 M1, M2, M3 D1, D2, D3	Assignment 2: 2D/3D Piece Inspired by 'Nature'	Fine art printmaker initially decides on subject then gathers visual material. Printmaker develops and reviews samples and then makes a final piece.	Tutor, self and peer assessment. Exhibition.

Links to other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Art and Design sector suite. This unit has particular links with:

Level 1	Level 2	Level 3
Creative Use of Materials, Techniques and Processes	Creative Stitch	Exploring Specialist Techniques
	Fabric Manipulation	Embroidered Textiles
		Textile Installation
		3D Sculptural Textiles

National Occupational Standards

This unit also provides development opportunities for some of the underpinning skills, knowledge and understanding of the following National Occupational Standards:

Skillfast-UK Sector Skills Council

Textiles and Material Design

- HSI – Health, safety and security at work
- DI – Research design information and ideas for textiles and materials using a range of techniques

Essential resources

Learners require access to studios for paper-based ideas development and workshops in the three textile areas of weave, print and knit. Learners need sufficient access to each of these areas to allow time for experimentation. Access to sewing machines and equipment is essential. Learners should be inducted on all pieces of equipment and all aspects of health and safety that relate to the textile areas in which they will be working.

Employer engagement and vocational contexts

Centres should develop links with practising artists, craftspeople and designers to deliver assignments to learners or to provide work experience.

Links with employers are essential to the delivery of the programme for work experience and future employment.

Vocational learning support resources:

- Learning and Skills Network – www.vocationallearning.org.uk

Business and finance advice:

- local and regional Business Link – www.businesslink.gov.uk

Assignments should be vocationally relevant; centres should consider the delivery of 'live projects', for example, to support the vocational content of the unit and programme.

Creative and Cultural Skills (www.ccskills.org.uk), the Sector Skills Council for Arts, Crafts and Design, has launched the web portal Creative Choices (www.creative-choices.co.uk). This portal has a range of information about careers in the arts, crafts and design sector, including job descriptions.

Skillfast-UK, the Sector Skills Council for Fashion and Textiles (www.skillfast-uk.org), provides details on careers (www.skillfast-uk.org/justthejob) and the industry and has regularly updated news and events pages.

Indicative reading for learners

Textbooks

Colchester C – *The New Textiles: Trends and Traditions* (Thames & Hudson, 1993) ISBN 978-0500277379

Geijer A – *A History of Textile Art* (Sotheby's Publications, 1979) ISBN 978-0856670558

Gillow J and Sentance B – *World Textiles: A Visual Guide to Traditional Techniques* (Thames & Hudson, 2004) ISBN 978-0500282472

Harris J – *5000 Years of Textiles* (British Museum Press, 2004) ISBN 978-0714125701

Perry E – *Exploring Textile Arts: The Ultimate Guide to Manipulating, Coloring, and Embellishing Fabrics* (Creative Publishing International, 2002) ISBN 978-1589230484

Wolff C – *The Art of Manipulating Fabric* (KP Books, 1996) ISBN 978-0801984969

Journals

Fibre Arts USA

International Textiles

Selvedge

Websites

www.craftscouncil.org.uk

www.design-council.org.uk

www.designmuseum.org

www.vam.ac.uk

Crafts Council

Design Council

Design Museums

Victoria and Albert Museum

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	researching the properties and characteristics of a range of fabrics and materials
Creative thinkers	exploring properties and characteristics in sampling of fabrics and materials
Reflective learners	reviewing and refining all work undertaken
Self-managers	producing work to meet deadlines producing work to meet a given scenario.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	working independently to identify properties and characteristics of a range of fabrics and materials
Creative thinkers	creatively developing samples to final outcomes creatively presenting work to a given scenario
Reflective learners	fluently reflecting on their work adapting and refining work as it progresses
Team workers	working as part of a team to produce a group outcome working with peers to share resource base
Self-managers	managing own time effectively to meet assessment criteria negotiating their own brief
Effective participators	participating in external events which contribute to final outcome effectively participating in group environment.

Functional Skills – Level 2

Skill	When learners are ...
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	gathering research material on the properties and characteristics of fabrics and materials
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	synthesising information to produce a report making a formal presentation evaluating and refining work in a presentation format
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	
Skill	When learners are ...
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	participating in a group discussion participating and contributing to group critique
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading research materials to produce reports
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	presenting a written report on research undertaken producing a written evaluation of the work undertaken.