



ZIMBABWE

**MINISTRY OF PRIMARY AND SECONDARY EDUCATION**

# **TEXTILE TECHNOLOGY AND DESIGN SYLLABUS**

**FORMS 5 - 6**

**2015 - 2022**

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## 1.0 PREAMBLE

### 1.1 INTRODUCTION

The learning area covers both theoretical and practical aspects of Textile Technology and Design. The syllabus recognises the use of Textile Technology and Design as a tool for inclusivity that encourages learners to appreciate diversity and differences. The learning area intends to develop learners of various social settings in the use of locally available resources in order to develop patriotism. It is intended to empower the learner to function in the prevailing economy which is production oriented.

The syllabus embraces the skills done in Textile Technology and Design in the quest for creating high level of economic independence in Zimbabwe. Therefore, practical work is an integral and expected part of the learning area requiring scientific and investigative work.

To gain entry, the learner must have obtained at least an 'O' Level pass in Textile Technology and Design and two of the following: either one science and one business subject or all science subjects. Industrial attachment is highly recommended throughout the learning period. Teachers are therefore advised to ensure that learners undertake experimental work in an appropriate and safe environment.

### 1.2 RATIONALE

The Textile Technology and Design syllabus brings out the important roles that the learning area plays in society such as self-sufficiency, enterprising and patriotism in preserving norms and values (Unhu/Ubuntu/Vumunhu). The learning area creates life-long skills which include creative thinking and problem solving. The Textile Technology and Design syllabus intends to achieve balanced knowledge, understanding and skills acquisition which enable learners to become independent in aspects of life such as self-employment, employment and further education.

### 1.3 SUMMARY OF CONTENT

Textile Technology and Design will cover theory and practical activities in the following areas:

- Textile technology
- Textile design
- Garment design and construction
- Business and enterprising studies

The two year learning phase seeks to develop the following skills among others:

- technical
- communication
- problem solving
- critical thinking
- evaluation and analysis
- leadership
- learning and innovation
- enterprise
- creativity
- interpersonal
- decision making
- technological
- self management

### 1.4 ASSUMPTIONS

It is assumed that learners have:

- a basic knowledge of textile fibres
- the basic knowledge of designing and garment construction
- knowledge about the use of some basic sewing equipment such as sewing machine, irons and scissors
- basic enterprise skills

### 1.5 CROSS- CUTTING THEMES

- Gender equity
- Sexuality, HIV and AIDS
- Heritage studies.
- Financial literacy
- Disaster risk management
- Human rights
- Children's rights and responsibilities
- Environmental issues
- Guidance and counseling
- Collaboration
- ICT

## 2.0 PRESENTATION OF THE SYLLABUS

The Form 5 - 6 Textile Technology and Design syllabus is one document which consists of the preamble, aims, objectives, topics, methodology and time allocation, scope and sequence and content matrix. Assessment is in both theory and practical activities.

## 3.0 AIMS

The syllabus aims are to:

- 3.1 encourage learners to have an investigative approach to the study of Textile Technology and Design which includes problem solving, scientific, technical and creative skills
- 3.2 expose learners to the historical, cultural, functional, economical, managerial, enterprising and aesthetic aspects of Textile Technology and Design
- 3.3 develop awareness of how textile manufacturers and consumers interrelate in a changing multicultural and technological society
- 3.4 foster in learners the ability to make informed decisions and communicate ideas through appropriate terminology and media
- 3.5 nurture an informed awareness and appreciation of design and textiles as an applied field of study leading to higher education and a range of career options

## 4.0 OBJECTIVES

By the end of the 2 year learning period, learners should be able to:

- 4.1 explore creative use of materials, techniques and technologies in Textile Technology and Design
- 4.2 formulate solutions with the application of components in textile technology and design, garment construction, household goods and business studies
- 4.3 generate historical, cultural, functional, economical, managerial, enterprising and aesthetic ideas in Textile Technology and Design
- 4.4 analyse and apply relevant knowledge by organising and presenting information clearly and logically.

- 4.5 acquire competences in using textile technology
- 4.6 evaluate acquired knowledge and understanding useful in decision making
- 4.7 identify cultural artefacts and designs and use them to create textile products
- 4.8 design styles draft and make patterns for different functions and figure types
- 4.9 apply quality assurance skills in textile production processes

## 5.0 METHODOLOGY AND TIME ALLOCATION

### 5.1 METHODOLOGY

The stipulated objectives will be achieved by using the following methods:

- Field trips
- Experimental work
- Research
- Practical assignments/Projects
- Demonstrations
- Group discussions and presentations
- Debate
- Short lectures
- Attachments

NB:

-Students can be attached to textile and clothing industries, colleges and research centres during the holidays or weekends at least four weeks for the two year learning period.

-Teachers are encouraged to apply orthodidactic principles where possible. These include;

- visual tactile,
- simulation,
- concreteness

### 5.2 TIME ALLOCATION

To achieve the stated objectives for this syllabus, it is recommended to allocate 8– 10 periods per week of 35 - 40 minutes.

Two blocks of four periods for practical and one double period for theory per week should be allocated

## **6.0 TOPICS TO BE COVERED**

### **6.1 TEXTILE TECHNOLOGY**

#### **6.1.1 Textile science**

##### **6.1.2 Yarns**

- Yarn production
- Yarn properties
- Yarn count

### **6.2 TEXTILE DESIGN**

#### **6.2.1 Fabric construction**

- Weaving – (complex weaves)
- Knitting – warp and weft
- Non-woven methods
- Fabric properties

#### **6.2.2 Fabric Finishes**

- Functional
- Special

#### **6.2.3 Colour application**

- Dyeing
- Printing
- Indigenous techniques

#### **6.2.4 Care of fabrics**

- Care labeling

#### **6.2.5 Textile enhancement processes and related crafts**

## **6.3 GARMENT DESIGN AND CONSTRUCTION**

### **6.3.1 Garment Design**

- Elements and principles of designing
- Designing equipment
- Design illustration
- Design process
- Pattern making
- Computer Aided Design
- Design Costing

### **6.3.2 Garment Construction**

- Manufacturing processes
- Use of specialised equipment in cutting and garment production
- Computer Aided Manufacturing

## **6.4 BUSINESS AND ENTERPRISING STUDIES**

### **6.4.1 Types of business such as: sole trader, partnership, cooperative**

- Business Finance
- Sources of capital
- Book keeping

### **6.4.2 Management**

- Functions of management:  
planning, leading, controlling  
and organizing

### **6.4.3 Business Planning**

- Business proposal

### **6.4.4 Marketing**

- Marketing research
- Product development
- Advertising

### **6.4.5 Production**

- Production system

## 7.0 SCOPE AND SEQUENCE

TOPIC	FORM 5	FORM 6
7.1 TEXTILE TECHNOLOGY		
7.1.1 Textile Science	<ul style="list-style-type: none"> <li>• Molecular structure and formulae</li> <li>• Polymerisation and their types</li> <li>• Forces of attraction <ul style="list-style-type: none"> <li>- intramolecular</li> <li>- inter-molecular</li> </ul> </li> <li>• Fibres</li> <li>• requirements of fibre forming polymers <ul style="list-style-type: none"> <li>- polymer system</li> <li>- microscopic, biological, thermal, physical and chemical properties</li> <li>- fibre processing</li> <li>- fibre swatches</li> </ul> </li> </ul>	
7.1.2 Yarns	<ul style="list-style-type: none"> <li>• Spinning system methods</li> <li>• Types of yarns</li> <li>• Properties and uses of yarns</li> <li>• Yarn count</li> </ul>	<ul style="list-style-type: none"> <li>• Weaving process</li> <li>• Complex weaves</li> <li>• Structure of weaves</li> <li>• Properties of complex woven fabrics</li> </ul>
7.2 TEXTILE DESIGN		
7.2.1 Fabric construction		
	<ul style="list-style-type: none"> <li>- Weaving</li> <li>- Knitting</li> <li>- Other methods of fabric --- -----Construction</li> </ul>	<ul style="list-style-type: none"> <li>• Nonwoven fabrics</li> <li>- non-woven fabrics</li> </ul>

<b>TOPIC</b>	<b>FORM 5</b>	<b>FORM 6</b>
- Fabric finishes		<ul style="list-style-type: none"> <li>• Mechanical /physical</li> <li>• Chemical</li> </ul>
- Colour application		<ul style="list-style-type: none"> <li>• Dyeing and Printing techniques</li> <li>• Indigenous techniques</li> </ul>
- Textile enhancement processes and related crafts		<ul style="list-style-type: none"> <li>• Decorative processes such as :           <ul style="list-style-type: none"> <li>- embroidery</li> <li>- patchwork</li> <li>- beadwork</li> <li>- basketry</li> </ul> </li> </ul>
<b>7.3 GARMENT DESIGN AND CONSTRUCTION</b>		
7.3.1 Garment Design		
- Design elements	<ul style="list-style-type: none"> <li>• Elements of design</li> <li>• Principles of design</li> <li>• Design equipment</li> <li>• Design Illustrations</li> <li>• Design process</li> <li>• Design costing</li> </ul>	
- Pattern making	<ul style="list-style-type: none"> <li>• Sizing system</li> <li>• Basic blocks</li> <li>• Block styling</li> </ul>	
- Computer Aided Design (CAD)		<ul style="list-style-type: none"> <li>• CAD and software</li> </ul>

TOPIC	FORM 5	FORM 6
- Production		<ul style="list-style-type: none"> <li>• Production systems</li> <li>• Production function models</li> <li>• Quality control</li> </ul>
- Equipment	<ul style="list-style-type: none"> <li>• Specialized equipment in garment construction</li> </ul>	
- Computer Aided Manufacturing (CAM)		<ul style="list-style-type: none"> <li>• Computer Aided Manufacturing and software</li> </ul>
- Garment costing		<ul style="list-style-type: none"> <li>• Costing components</li> </ul>
<b>7.4 BUSINESS AND ENTERPRISING</b>		
7.4.1 Types of business enterprise and business finance	<ul style="list-style-type: none"> <li>• Factors affecting textile business environment</li> <li>• Types of business units</li> <li>• Characteristics of business units</li> <li>• Objectives for starting a business</li> <li>• Business finance</li> </ul>	
7.4.2 Management		<ul style="list-style-type: none"> <li>• Functions of management</li> </ul>
7.4.3 Marketing		<ul style="list-style-type: none"> <li>• Marketing research</li> <li>• Product development</li> <li>• Marketing mix</li> </ul>

## 8.0 COMPETENCY MATRIX

### 8.1 FORM 5

TOPIC	OBJECTIVES Learners should be able to:	UNIT CONTENT (skills, attitudes and knowledge)	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
<b>8.1.1 TEXTILE TECHNOLOGY</b>	<ul style="list-style-type: none"> <li>- <b>Textile science</b> <ul style="list-style-type: none"> <li>• identify organic elements in a periodic table and their formulae</li> <li>• analyse chemical elements and compounds</li> <li>• explain polymerization</li> <li>• discuss the formation of polymers</li> <li>• distinguish between inter and intra molecular forces</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Organic elements in the periodic table</li> <li>• Molecular formulae and structure:             <ul style="list-style-type: none"> <li>- chemical elements</li> <li>- chemical compounds</li> </ul> </li> <li>• Polymerization and its types</li> <li>• Formation of polymers and their types</li> <li>• Forces of attraction             <ul style="list-style-type: none"> <li>- intra molecular</li> <li>- inter molecular</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Explaining organic elements in a periodic table and their formulae</li> <li>• Drawing atomic structures of elements and compounds</li> <li>• Describing the process of polymerization</li> <li>• Listing types of polymers</li> <li>• Illustrating the formation of polymers</li> <li>• Discussing inter and intra molecular forces</li> <li>• Drawing the chemical structure of inter and intra forces</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-media</li> <li>• Resource person</li> <li>• Realia</li> <li>• Microscope</li> </ul>
- <b>Fibres</b>	<ul style="list-style-type: none"> <li>• identify the requirements of fibre forming polymers</li> </ul>	<ul style="list-style-type: none"> <li>• Requirements of fibre forming polymers</li> </ul>	<ul style="list-style-type: none"> <li>• Explaining the requirements of fibre forming polymers</li> </ul>	<ul style="list-style-type: none"> <li>• Multimedia</li> </ul>

TOPIC	OBJECTIVES Learners should be able to:	UNIT CONTENT (skills, attitudes and knowledge)	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
	<ul style="list-style-type: none"> <li>• explain the polymer system of natural and manmade fibres</li> <li>• analyse microscopic, physical, chemical, biological and thermal properties of natural and manmade fibres</li> </ul>	<ul style="list-style-type: none"> <li>• Polymer system of natural and manmade fibres</li> <li>• Microscopic, physical, chemical, biological and thermal properties of natural and man-made fibres</li> </ul>	<ul style="list-style-type: none"> <li>• Discussing the amorphous and crystalline regions</li> <li>• Stating the dominating forces of attraction</li> <li>• Illustrating chemical structure of the polymer system</li> <li>• Observing microscopic, physical, chemical, biological and thermal properties of natural and man-made fibres</li> <li>• Describing microscopic, physical, chemical, biological and thermal properties of natural and man-made fibres.</li> </ul>	<ul style="list-style-type: none"> <li>• Realia</li> <li>• Multimedia</li> <li>• Resource person</li> </ul>
- Fibre production	<ul style="list-style-type: none"> <li>• classify fibres according to their sources</li> <li>• describe the production processes of natural and man-made fibres</li> <li>• distinguish between natural and manmade fibre swatches</li> <li>• explain the spinning methods used for natural and manmade fibres</li> </ul>	<ul style="list-style-type: none"> <li>• Classification of fibres according to their sources</li> <li>• Production of natural and man-made fibres</li> <li>• Natural and man-made fibres</li> <li>• Spinning methods</li> </ul>	<ul style="list-style-type: none"> <li>• Explaining fibres according to their sources</li> <li>• Discussing the production processes of natural and man-made fibres</li> <li>• Identifying fibre swatches from different sources</li> <li>• Describing the spinning process of</li> </ul>	<ul style="list-style-type: none"> <li>• Realia</li> <li>• Multimedia</li> <li>• Resource person</li> </ul>

<b>TOPIC</b>	<b>OBJECTIVES</b> Learners should be able to:	<b>UNIT CONTENT (skills, attitudes and knowledge)</b>	<b>SUGGESTED LEARNING ACTIVITIES AND NOTES</b>	<b>SUGGESTED RESOURCES</b>
- <b>Yarns</b>	<ul style="list-style-type: none"> <li>• identify spinning methods used to produce different yarns</li> <li>• classify types of yarns</li> <li>• analyse properties and uses of yarns</li> <li>• explain the numbering system of yarns</li> </ul>	<ul style="list-style-type: none"> <li>• Spinning methods</li> <li>• Types of yarns</li> <li>• Properties and uses of yarns</li> <li>• Yarn count</li> </ul>	<ul style="list-style-type: none"> <li>• Describing the spinning methods</li> <li>• Explaining types of yarns</li> <li>• Illustrating different types of yarns</li> <li>• Discussing yarn properties</li> <li>• Explaining the uses of yarns</li> <li>• Calculating yarn count</li> </ul>	<ul style="list-style-type: none"> <li>• Multi media</li> <li>• Field trip</li> </ul>

TOPIC	OBJECTIVES Learners should be able to:	UNIT CONTENT (Skills, attitude and knowledge)	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
<b>8.1.2 GARMENT DESIGN AND CONSTRUCTION</b> - Design elements	<ul style="list-style-type: none"> <li>• analyse elements of design</li> <li>• illustrate elements of design</li> </ul>	<ul style="list-style-type: none"> <li>• Elements of design:           <ul style="list-style-type: none"> <li>- line</li> <li>- form</li> <li>- shape</li> <li>- colour</li> <li>- texture</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Discussing design elements</li> <li>• Demonstrating how design elements are used</li> </ul>	<ul style="list-style-type: none"> <li>• ICT tools</li> <li>• Design pictures</li> </ul>
- Design principles	<ul style="list-style-type: none"> <li>• examine the principles of design</li> <li>• demonstrate principles of design</li> </ul>	<ul style="list-style-type: none"> <li>• Principles of design:           <ul style="list-style-type: none"> <li>- rhythm</li> <li>- balance</li> <li>- emphasis</li> <li>- harmony</li> <li>- proportion</li> <li>- scale</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Discussing principles of design</li> <li>• Illustrating the principles of design</li> </ul>	<ul style="list-style-type: none"> <li>• Clothing catalogues</li> <li>• Sample garments</li> <li>• ICT tools</li> </ul>
- Design equipment	<ul style="list-style-type: none"> <li>• analyse designing equipment</li> <li>• draw using design equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Design equipment:           <ul style="list-style-type: none"> <li>- silhouettes</li> <li>- motion drawings</li> <li>- pose</li> <li>- mood</li> <li>- style</li> <li>- use of colour and media</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Explaining designing equipment</li> <li>• Sketching designs using design equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Realia design equipment Pictures</li> </ul>
- Designing illustrations	<ul style="list-style-type: none"> <li>• recognise figure demarcations</li> <li>• represent style features on the silhouette</li> </ul>	<ul style="list-style-type: none"> <li>• Figure anthropometry</li> <li>• Figure dressing (style features)</li> </ul>	<ul style="list-style-type: none"> <li>• Distinguishing figure demarcations</li> <li>• Illustrating styles on silhouettes</li> </ul>	<ul style="list-style-type: none"> <li>• Designing equipment</li> <li>• Colouring equipment</li> </ul>

<b>TOPIC</b>	<b>OBJECTIVES</b> Learners should be able to:	<b>UNIT CONTENT (Skills, attitude and knowledge)</b>	<b>SUGGESTED LEARNING ACTIVITIES AND NOTES</b>	<b>SUGGESTED RESOURCES</b>
	<ul style="list-style-type: none"> <li>• paint illustration</li> <li>• draw flat diagram</li> <li>• indicate style features</li> </ul>	<ul style="list-style-type: none"> <li>• Illustration painting (colouring)</li> <li>• Flat diagram illustration</li> <li>• Labelling of style features</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrating painting of the illustration</li> <li>• Constructing flat diagrams</li> <li>• Labeling the style features</li> </ul>	
- <b>Designing process</b>	<ul style="list-style-type: none"> <li>• identify design opportunity</li> <li>• compose a design proposal</li> <li>• make a prototype</li> <li>• analyse the prototype</li> </ul>	<ul style="list-style-type: none"> <li>• Design opportunity</li> <li>• Design proposal</li> <li>• Prototype</li> <li>• Testing and evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Investigating design opportunity</li> <li>• Developing a design proposal</li> <li>• Constructing a prototype</li> <li>• Evaluating the prototype</li> </ul>	<ul style="list-style-type: none"> <li>• Designing equipment</li> </ul>
- <b>Design costing</b>	<ul style="list-style-type: none"> <li>• identify unique features in a design</li> <li>• relate design to current fashion trends</li> <li>• calculate the cost in relation to time spent in designing</li> </ul>	<ul style="list-style-type: none"> <li>• Uniqueness/creativity</li> <li>• Alignment to fashion trends</li> <li>• Time spent to design</li> </ul>	<ul style="list-style-type: none"> <li>• Recognising creativity in the design</li> <li>• Rating designs according to current fashion trends</li> <li>• Expressing time spent on design costing</li> </ul>	<ul style="list-style-type: none"> <li>• Pictures</li> <li>• Resource person</li> </ul>
- <b>Pattern making</b>	<ul style="list-style-type: none"> <li>• relate to size charts and individual body measurements</li> <li>• generate basic blocks</li> <li>• formulate various styles from given basic blocks</li> </ul>	<ul style="list-style-type: none"> <li>• Sizing systems</li> <li>• Basic blocks: <ul style="list-style-type: none"> <li>- skirt</li> <li>- bodice</li> <li>- dress</li> <li>- trousers</li> </ul> </li> <li>• Block styling</li> </ul>	<ul style="list-style-type: none"> <li>• Referring to the size charts and individual body measurements for constructing basic blocks</li> <li>• Constructing basic blocks</li> <li>• Designing various styles on basic blocks</li> </ul>	<ul style="list-style-type: none"> <li>• Fashion catalogues</li> <li>• Pattern making equipment</li> </ul>

<b>TOPIC</b>	<b>OBJECTIVES</b> Learners should be able to:	<b>UNIT CONTENT (skills, attitude and knowledge)</b>	<b>SUGGESTED LEARNING ACTIVITIES AND NOTES</b>	<b>SUGGESTED RESOURCES</b>
- <b>Equipment</b>	<ul style="list-style-type: none"> <li>• operate the equipment for cutting, garment production and pressing</li> </ul>	<ul style="list-style-type: none"> <li>• Cutting -cutting blades</li> <li>• Garment production <ul style="list-style-type: none"> <li>- over locker</li> <li>- bartack</li> <li>- embroidery machine</li> <li>- flossing machine</li> <li>- elasticating machine</li> <li>- hemming machine</li> <li>- Pressing</li> <li>- steam presser</li> <li>- vacuum presser</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrating the use of cutting, garment production and pressing equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment</li> <li>• Multimedia</li> <li>• Resource person</li> </ul>

TOPIC	OBJECTIVES Learners should be able to:	UNIT CONTENT (Skills, attitude and knowledge)	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
<b>8.1.3 BUSINESS AND ENTERPRISING</b> - Types of business enterprise and business finance	<ul style="list-style-type: none"> <li>• identify various factors that affect textile business environment</li> <li>• explain different types of business units</li> <li>• distinguish the characteristics of business units</li> <li>• examine the objectives of starting a business</li> <li>• evaluate the importance of business proposal, sourcing funds and book keeping</li> </ul>	<ul style="list-style-type: none"> <li>• Factors affecting textile business environment</li> <li>• Types of business units: <ul style="list-style-type: none"> <li>- sole trader</li> <li>- partnership</li> <li>- cooperative</li> </ul> </li> <li>• Characteristics of business units</li> <li>• Objectives for starting a business</li> <li>• Business finance: <ul style="list-style-type: none"> <li>- business proposal</li> <li>- sourcing funds</li> <li>- book keeping</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Discussing various factors that affect textile business environment</li> <li>• Comparing different types of business units</li> <li>• Examining the characteristics of business units</li> <li>• Discussing the objectives for starting a business</li> <li>• Drawing up a business proposal</li> <li>• Sourcing funds and book keeping</li> <li>• Visiting Small to Medium Enterprises</li> </ul>	<ul style="list-style-type: none"> <li>• Resource person</li> <li>• Multi-media</li> </ul>

## 8.2 FORM 6

TOPIC	Objectives Learners should be able to:	UNIT CONTENT (skills, attitudes and knowledge	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
8.2.1 TEXTILE DESIGN - Fabric Construction - Weaving	<ul style="list-style-type: none"> <li>describe weaving process</li> <li>illustrate structures of different weaves</li> <li>make samples of different weaves</li> <li>explain properties of complex weaves</li> <li>illustrate the structure of knitted fabrics</li> <li>compare different samples of knitted fabrics</li> <li>describe non-woven fabrics</li> </ul>	<ul style="list-style-type: none"> <li>Weaving process</li> <li>Complex weaves:           <ul style="list-style-type: none"> <li>- dobby</li> <li>- jacquard</li> <li>- honeycomb</li> <li>- pique</li> <li>- pile</li> </ul> </li> <li>Structures of weaves</li> <li>Properties of weaves</li> </ul>	<ul style="list-style-type: none"> <li>Discussing weaving process</li> <li>Sketching structures of different weaves</li> <li>Constructing samples of different weaves</li> <li>Visiting spinning companies</li> <li>Identifying properties of complex weaves</li> <li>Structure of knitted fabrics</li> <li>Properties of knitted fabrics</li> </ul>	<ul style="list-style-type: none"> <li>Samples</li> <li>Expert guest</li> <li>Realia</li> <li>Multimedia</li> <li>Resource person</li> <li>Samples of knitted fabrics</li> <li>Samples of non-woven fabrics</li> <li>Multimedia</li> </ul>

TOPIC	Objectives Learners should be able to:	UNIT CONTENT (skills, attitudes and knowledge	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
<b>- Fabric finishes</b>	<ul style="list-style-type: none"> <li>• examine mechanical/ physical and chemical finishes</li> <li>• demonstrate finishing techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanical/physical</li> <li>• Chemical</li> </ul>	<ul style="list-style-type: none"> <li>• Discussing the major groups of fabric finishes</li> <li>• Applying finishing techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-media</li> <li>• Realia</li> </ul>
<b>- Colour application</b>	<ul style="list-style-type: none"> <li>• assess the different types of dyeing and printing techniques</li> <li>• demonstrate different types of dyeing, printing and indigenous techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Dyeing and printing techniques</li> <li>• Indigenous techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Discussing dyeing and printing techniques</li> <li>• Applying dyeing and printing techniques</li> <li>• Explaining indigenous techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Dyeing and printing equipment</li> <li>• Dyes and printing paste</li> <li>• Fabric</li> <li>• Multimedia</li> <li>• Resource person</li> </ul>
<b>- Textile enhancement processes and related crafts</b>	<ul style="list-style-type: none"> <li>• identify different decorative processes</li> <li>• analyse the characteristics of different decorative processes and related crafts</li> </ul>	<ul style="list-style-type: none"> <li>• Decorative processes such as:           <ul style="list-style-type: none"> <li>- embroidery</li> <li>- patchwork</li> <li>- bead work</li> <li>- basketry</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Discussing the different decorative processes</li> <li>• Demonstrate the use of different decorative processes on samples and garments</li> <li>• Constructing different crafts items</li> </ul>	<ul style="list-style-type: none"> <li>• Samples of decorative processes</li> <li>• Multimedia</li> <li>• Resource person</li> </ul>

TOPIC	OBJECTIVES Learners should be able to:	UNIT CONTENT (skills, attitudes and knowledge)	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
<b>8.2.2 GARMENT DESIGN AND CONSTRUCTION</b>				
- Computer Aided Design (CAD)	<ul style="list-style-type: none"> <li>• design patterns using CAD software</li> <li>• examine the CAD system Textile Technology and Design</li> </ul>	<ul style="list-style-type: none"> <li>• Software used in CAD</li> <li>• Advantages and disadvantages of CAD in Textile Technology and Design</li> <li>• Visiting companies which use the CAD system in pattern making</li> </ul>	<ul style="list-style-type: none"> <li>• Drafting patterns using CAD</li> <li>• Analysing the CAD system in Textile Technology and Design</li> <li>• Identifying the production systems in Textile Technology and Design</li> <li>• Discussing the production systems in Textile Technology and Design</li> <li>• Examining the production functions model</li> <li>• Impact of change and innovation upon production systems</li> <li>• Quality control</li> </ul>	<ul style="list-style-type: none"> <li>• CAD software</li> <li>• Computers</li> <li>• Resource person</li> <li>• Realia</li> <li>• Resource persons</li> </ul>
- Production	<ul style="list-style-type: none"> <li>• differentiate the production systems in Textile Technology and Design</li> <li>• Explain the production functions model</li> <li>• critique the impact of change and innovation upon production systems</li> <li>• examine the importance of quality control at each stage of production in the Textile Technology and Design</li> </ul>	<ul style="list-style-type: none"> <li>• Production systems           <ul style="list-style-type: none"> <li>- continuous/mass batch</li> <li>- single item</li> </ul> </li> <li>• Production functions model</li> </ul>	<ul style="list-style-type: none"> <li>• Analysing the impact of change and innovation upon production systems</li> <li>• Explaining quality control in Textile Technology and Design</li> </ul>	<ul style="list-style-type: none"> <li>• Justifying the use of CAM in garment manufacturing</li> <li>• Criticising the use of CAM in manufacturing</li> <li>• Software for CAM</li> <li>• Machines</li> </ul>

<b>TOPIC</b>	<b>OBJECTIVES</b> Learners should be able to:	<b>UNIT CONTENT (skills, attitudes and knowledge)</b>	<b>SUGGESTED LEARNING ACTIVITIES AND NOTES</b>	<b>SUGGESTED RESOURCES</b>
			<ul style="list-style-type: none"> <li>• Visiting companies which use CAM in manufacturing</li> </ul>	
- <b>Garment costing</b>	<ul style="list-style-type: none"> <li>• justify the cost of garments</li> <li>• evaluate how the components contribute to the garment cost</li> <li>• determine the selling price of the garment</li> </ul>	<ul style="list-style-type: none"> <li>• Material cost</li> <li>• Production cost</li> <li>• Overheads</li> <li>• Profit</li> <li>• Selling price</li> </ul>	<ul style="list-style-type: none"> <li>• Breaking down the components which contribute to garment costs</li> <li>• Calculating the cost of material, production and overheads</li> </ul>	<ul style="list-style-type: none"> <li>• Real garments</li> </ul>

TOPIC	OBJECTIVES Learners should be able to:	UNIT attitudes and knowledge)	CONTENT(skills, knowledge)	SUGGESTED LEARNING ACTIVITIES AND NOTES	SUGGESTED RESOURCES
<b>8.2.3 BUSINESS AND ENTERPRISING</b> - Management	<ul style="list-style-type: none"> <li>• explain the four functions of management</li> </ul>	<ul style="list-style-type: none"> <li>• Functions of management:           <ul style="list-style-type: none"> <li>- planning</li> <li>- controlling</li> <li>- leading</li> <li>- organising</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Discussing the four functions of management</li> <li>• Demonstrating the four functions of management</li> </ul>	<ul style="list-style-type: none"> <li>• Resource person</li> <li>• Multi-media</li> <li>• Case studies</li> </ul>	

## 9.0 ASSESSMENT

The syllabus will be assessed in two components which are practical and theory in the form of continuous and summative assessment.

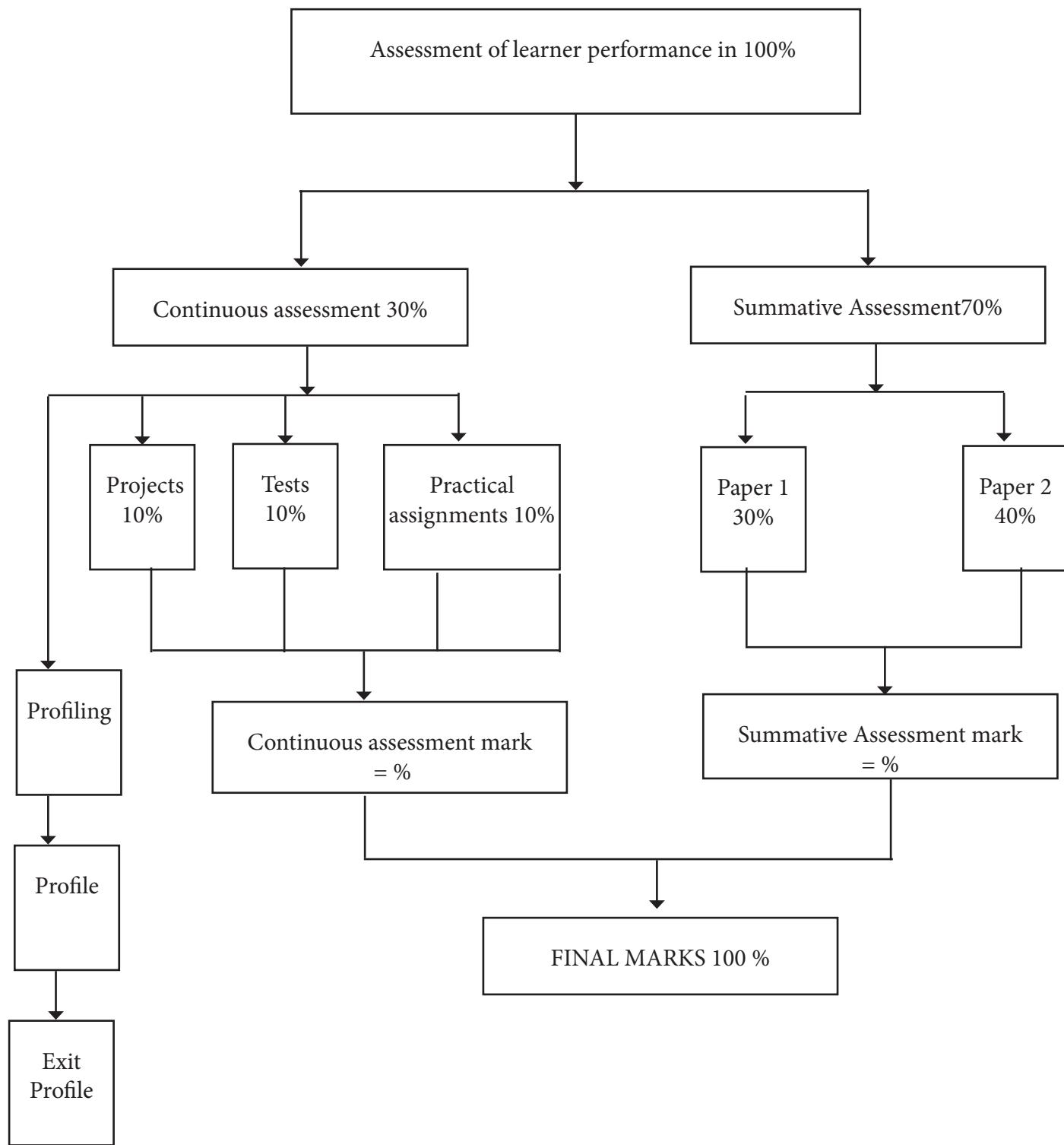
### 9.1 Assessment Objectives

By the end of the learning period, learners should be able to:

- 9.1.1 analyse the relationship between textile properties and human needs
- 9.1.2 demonstrate scientific knowledge on the composition, structure and processing of textile fibres, yarns and fabrics
- 9.1.3 apply investigative skills in evaluating production processes and the inherent nature of textiles
- 9.1.4 demonstrate the ability to use technology in textile designing and manufacturing
- 9.1.5 study market needs and produce designs which suit the gaps in the market with a high degree of creativity and aesthetic value
- 9.1.6 demonstrate calculating skills in textile technology, garment construction and business
- 9.1.7 draft patterns according to specified designs and select the production system, ensuring quality in all the processes
- 9.1.8 select different skills in business such as leadership, bookkeeping and quality control to address the dynamic environment
- 9.1.9 carry out a market research
- 9.1.10 demonstrate different ways of fabric construction
- 9.1.11 analyse the effect of mechanical and chemical finishes on fabrics
- 9.1.12 apply dyeing and printing techniques on fabrics
- 9.1.13 construct and decorate textile products

## ASSESSMENT MODEL

Learners will be assessed using both continuous and summative assessments.(next page)



### 9.2.1 SCHEME OF ASSESSMENT

PAPER	TYPE OF PAPER	DURATION	MARKS	WEIGHTING
1	Theory	3hrs	100	30%
2	Practical examination	Day 1 –7 ½ hrs Day 2 - 7½ hrs	100	40%
3	Continuous assessment	6 terms	100	30%

### 9.2.2 PAPER DESCRIPTION

#### Paper 1: Theory

The paper is in two sections A and B. Section A is compulsory. This section will be awarded 40 marks. Section B consists of five questions. Candidates are required to answer three questions from section B. This section will be awarded 60 marks (20 marks for each question).

#### Paper 2: Practical Examination

The paper consists of 1 question which candidates will answer. The paper will be awarded 100 marks of which 40 will be for pattern making whilst 60 are for construction. Advance information should be issued to centres 3 weeks before the examination. The candidate will draft the required pattern, lay, cut out and construct the article in two consecutive days. Candidates should be given 30 minutes break per examination session.

#### Paper 3: Continuous assessment

Continuous assessment for Form 5 and 6 will consist of practical tasks, written tests and end of term examinations. The component will be awarded 100 marks

##### i) Practical Tasks

These are activities that teachers use in their day to day teaching. These may include subject related projects and individual practical assignments.

##### ii) Written Tests

These are tests set by the teacher to assess the concepts covered during a given period of up to a month. The tests should consist of structured and essay questions.

#### Summary of Continuous Assessment Tasks

In 5 terms, candidates are expected to have done at least the following recorded tasks per term:

- 1 practical test
- 2 written tests
- 1 Project

LEVEL	ASSESSMENT TASKS	FREQUENCY	WEIGHT %
5	Practical Theory tests Project	1 per term 2 per term 2 per year	5% 5% 5%
6	Practical Theory tests Project	1 per term 2 per term 2 per year	5% 5% 5%
<b>TOTAL</b>			<b>30%</b>

### SPECIFICATION GRID

#### Specification Grid for Continuous Assessment

Component Skills	Practical Tasks	Written Tests
<b>Skill 1</b> Knowledge and Comprehension	20%	20%
<b>Skill 2</b> Application and Analysis	50%	50%
<b>Skill 3</b> Synthesis and Evaluation	30%	30%
<b>Total</b>	<b>100%</b>	<b>100%</b>
<b>Weighting</b>	<b>21%</b>	<b>9%</b>

#### Specification Grid for Summative Assessment

	Paper 1	Paper 2	Total
<b>Skill 1</b> Knowledge and Comprehension	20%	10%	30%
<b>Skill 2</b> Application and Analysis	40%	60%	100%
<b>Skill 3</b> Synthesis and Evaluation	40%	30%	70%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>200%</b>
<b>Weighting</b>	<b>30%</b>	<b>40%</b>	<b>70%</b>

### SPECIFICATION GRID

ASSESSMENT OBJECTIVES	COMPONENTS		
	PAPER 1	PAPER 2	PAPER 3
1	+	-	+
2	+	-	+
3	+	+	+
4	-	+	+
5	+	+	+
6	+	+	+
7	-	+	+
8	+	+	+
9	+	+	+
10	+	+	+
11	+	-	+
12	-	+	+
13	-	+	+

## APPENDIX 1

Equipment Required for a Minimum of 15 Students

### 1. FACILITIES

- (i) Classroom
- (ii) Laboratory
- (iii) Library
- (iv) Workshop

The workshop must be purpose-designed

### 2. EQUIPMENT

- 2.1 10 Cutting Tables 1,80m x 90cm
- 2.2 Cutting tools
- 2.3 Sewing machines:
  - electric
  - manual
  - 5 Industrial electric straight sewers
  - over-lockers
    - 1 blind hemmer
- 2.4 Industrial pressing equipment
- 2.5 Dyeing and printing equipment
- 2.6 Designing equipment
- 2.7 Machine attachments

