**WEEK 7 YEAR 11 HOME ECONOMICS**

**LESSON 81**

STRAND: HEC 11.3 CLOTHING AND TEXTILES

SUB-STRAND: HEC 11.3.1 FIBRES AND FABRIC

LESSON OBJECTIVE: HEC 11.3.1.2: describe structural and surface design

**STRUCTURAL AND SURFACE DESIGN**

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|  | DESIGN | DEFINTION |
| 1 | SURFACE DESIGN | Is any type of work [ pattern, illustration, hand lettering etc] made by a designer that is intended to be applied to a surface to enhance its virtual appearance and/or functionally |
| 2 | STRUCTURAL DESIGN | * A woven –in pattern as opposed to one printed on a fabric * Provides insight on different types of design used for the production of woven and knitted fabrics, highlighting the effect design has on a fabrics properties and applications |

**VARIOUS METHODS OF BASIC AND TRADITIONAL FABRIC DECORATION**

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|  | **METHODS OF FABRIC DECORATION** | **DESCRIPTION** | **PROCESS/METHOD** |
| 1 | DYEING | Is the application of dyes or pigments o textile materials such as fibers, yarns, and fabrics with the objective of achieving color with desired fastness. | 1. Wash any finish out of cotton fabric so that dye can penetrate the fabric 2. Fold or scrunch up fabric 3. Tie with string/elastic bands 4. Mix up dye with salt and fix 5. Place in dye 6. Remove from dye 7. Rinse out excess dye and dry 8. Take off string and press with iron |
| 2 | PRINTING | * Is a process of decorating textile fabrics by application of pigments, dyes, or other related materials in the form of patterns. * Although apparently developed from the hand painting of fabrics, such methods are also of great antiquity. | 1. Wash any finish out of cotton fabric so that dye can penetrate the fabric 2. Mix up dye with salt and fix 3. Apply wax onto design where you want to keep the colour 4. Apply dye to fabric by painting the next layer of wax onto next colour 5. Repeat stages to build up pattern 6. Scratch away and apply dye 7. Melt wax off the fabric by placing fabric between wallpaper and ironing |

**ACTIVITY**

1. Differentiate between surface and structural design
2. Give an example of surface and structural design

3. Define the terms with examples:

a. dyeing

b. printing

**LESSON 82**

STRAND: HEC 11.3 CLOTHING AND TEXTILES

SUB-STRAND: HEC 11.3.1 FIBRES AND FABRIC

LESSON OBJECTIVE: HEC 11.3.1.2: Discuss various methods of basic and traditional fabric decoration.

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|  | **METHODS** | **DESCRIPTION** | **PROCESS/METHOD** |
| 1 | **EMBROIDERY** | Is the method used for decorating fabrics with a needle and a thread | 1. Choose the embroidery design you want to sew 2. Transfer it to your embroidery machine 3. Select your thread colors-use good quality thread 4. Make several stitches in place to lock the thread. Stitch out the design 5. Stop the design after each color and trim the jump threads-they will be easier to remove at this stage rather than trimming them all at the end 6. Remove excess stabilizer |
| 2 | **BRAIDING** | * Is the formation of comparatively narrow fabrics or rope –like structures by diagonally interlacing three or more strands of material. * Braids may be sewn together to make braided rugs * Hats, handbags can also be from various braids, including plastic and straw types. | 1. Braiding is one pf the major fabrication methods, and produces a rope-like material by interweaving three or more strands, strips or lengths in a diagonally overlapping pattern 2. It can be classified into two –and three dimensional braiding |
| 3 | **SEQUINS** | * Are small shiny disc sewn on to clothing for decorations * Are commonly used on clothing, jewelry, bags, shoes and many other accessories | 1. Begin with fine, long needle and suitable thread 2. Place the sequin with care on the top side of the fabric, sitting I the position that you want it to be 3. Bring the needle up through the fabric 4. Return to the backside of the fabric i.e the ends of the thread together on the back side to create secure knot. 5. Move on to the next sequin |
| 4 | **BEADS** | Are small piece of glass, stone, or similar material that is threaded with others to make a necklace or rosary or sewn on to fabric | 1. Can be worked from a spots, with one part, bead or sequin sewn on singly or as rows 2. The spots can have sequins and beads together as one unit 3. They can be placed in all over design or used singly, for example the centre of a flower motif 4. Rows are sued as outline design or to fill the design |
| 5 | **APPLIQUE** | * Is ornamental needlework in which pieces of fabric are sewn or stuck on to a larger piece to form a picture or pattern * Are made with ribbons, cords, beads sequins or any other materials. * Can be made with a sewing machine | 1. Trace the applique design piece[s] from the template on the paper side of fusible webbing, leaving about ½ inch between each piece 2. Cut out the pieces roughly leaving about ¼ inch of webbing 3. Place the fusible webbing piece[s] onto the wrong side of chosen fabric, then fuse for a few seconds with a dry iron around the tracing lines 4. Cut out applique piece[s] neatly on the lines 5. Peel off paper backing, then position applique pieces on project [webbing side down], layering the pieces as indicated on placement guide 6. To machine applique you need a basic machine capable of doing zigzag stitch |

**LESSON 83**

STRAND: HEC 11.3 CLOTHING AND TEXTILES

SUB-STRAND: HEC 11.3.1 FIBRES AND FABRIC

LESSON OBJECTIVE: HEC 11.3.1.2: Discuss various methods of basic and traditional fabric decoration.

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| 6 | **SHELLS** | * Are special forms of decorations that uses a needle and thread to stitch to a surface of fabric. * Are embellishment does not form an essential part of a textiles structure * Mostly used on clothing and decorative textiles | 1. Select the properly cleaned shells, needle and thread. Select a needle that is small enough to fit through the shells 2. Lock thread in the fabric by tying a knot in the end and insert the shell through the 2 holes made 3. Sew through the thread under the shell and make a knot to secure it and move the needle under the fabric to where the next shell |
| 7 | **MAGIMAGI** | * In FIJI, the fibre of the coconut husk is made into magimagi. * This can be very coarse like rope or extremely fine like string * Nowadays it is mostly used as decorative features on wedding attires, bags, belt buckles and other clothing accessories | 1. Mark a line directly onto the fabric where magimagi is intended to sit and use a straight stitch form the machine or glue it in place in the desired pattern 2. With right sides together, get ready to stitch your seam. Use a pin to secure magimagi in place if necessary 3. Sew or glue accordingly onto your fabric |

**DYES AND PIGMENT**

* Are substance that impart color to a material
* Dyes are usually soluble or can be made to be soluble, in water
* Pigments are not soluble in water, oil or other common solvents
* Once a dye is dissolved in water, the aterial to be dyed can be immersed in dye solution

***NB: to apply pigments to a material they have to be first ground into fine powder and thoroughly mixed with some liuquid, called the dispersing agent or vehicle.***

**ACTIVITY**

**Explain the methods of decoration below:**

1. **Embroidery**
2. **Sequins**
3. **Applique**

**LESSON 84**

STRAND: HEC 11.3 CLOTHING AND TEXTILES

SUB-STRAND: HEC 11.3.1 FIBRES AND FABRIC

LESSON OBJECTIVE: HEC 11.3.1.2: Discuss methods of applying color on fabrics

METHODS OF APPLYING COLOR TO FABRICS:

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| **NO.** | **METHODS** | | **DESCRIPTION** |
| **1** | **FIBER DYEING** |  | Is the method of dyeing before blending woth other colors to give fancy yarn or fabrics |
| **2** | **YARN DYEING** |  | Method of dyeing yarns in fprms of hanks or packages dyeing |
| **3** | **FABRIC DYEING** |  | Is the method after weaving, knitting our non-woven to make fabrics |

**MORDANT**

* Is a chemical binding agent that adheres well both the fibres and the dye
* Is a substance used to set dyes on fabrics by forming a coordination complex with the dye which then attached to the fabric
* Is always a polyvalent metal ion

**Importance of mordant dyes**

* Are done for getting the binding action of the chrome
* They are mostly used for wool which gets a good color fastness after treatment with mordant dyes
* Also used for cotton, linen, silk, rayon and nylon but are less effective for them
* It requires less time
* Has high production
* Has easier shades matchig and dyeing is carried in one stage

**LESSON 85**

STRAND: HEC 11.3 CLOTHING AND TEXTILES

SUB-STRAND: HEC 11.3.1 FIBRES AND FABRIC

LESSON OBJECTIVE: HEC 11.3.1.2: Identify and discuss the different types of printing and explain their advantages and disadvantage.

**PRINTED FABRICS**

* Are defined as fabrics that have been decorated by a motif, pattern or design applied to the surfaces opf the fabric after it has been constructed.
* A form of applying colour decoration to a fabric after it has otherwise been finished

TYPES OF PRINTING

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|  | **TYPES** | **DESCRIPTION** | **ADVANTAGES** |
| 1 | SCREEN PRINTING | * Method in which ink is applied directly to the surface to be printed [substrate] * The ink is wiped across the screen to pass through the unblocked pores and reach the substrate. * For each color to be printed a separate screen is prepared and the process is repeated * It is more suitable for curved shapes [such as bottles and cups], non-porous surfaces [such as ceramics and metals], and short print runs * Also called as sengraphy | * Colours can be produced in brighter, cleaner shades than are possible woth roller printing * Designs to be repeated can be much larger than in roller printing * Rotary metal screens are lightweight in contrast to heavy copper rollers in roller printing |
| 2 | STENCIL PRINTING | * The pattern is cut out of a sheet of stout paper or thin metal with a sharp pointed tool, the uncut portions representing the part that is to be left uncolored. * The sheet is laid on the material to be decorated and colour is brushed through its open spaces. | |
| 3 | BLOCK PRINTING | * The blocks are usually made of wood and the design is hand carved, so that it strands out in relief against the background surface. * The print paste is applied to the design surface on the block and the block then pressed against the fabric * The process is repeated with different designs and colours until pattern is complete | |

**YEAR 11 HOME ECONOMICS WEEKLY WORKSHEET 7**

1. Differentiate between surface design and structural design.
2. Write down one factor to remember when using the following decoration
3. Stencil printing
4. Embroidery
5. Applique
6. Discuss two advantages of screen printing.
7. Describe the three methods of applying colour to fabric.
8. Discuss the term *Mordant.*
9. Discuss **two** importance of Mordant in fabrics